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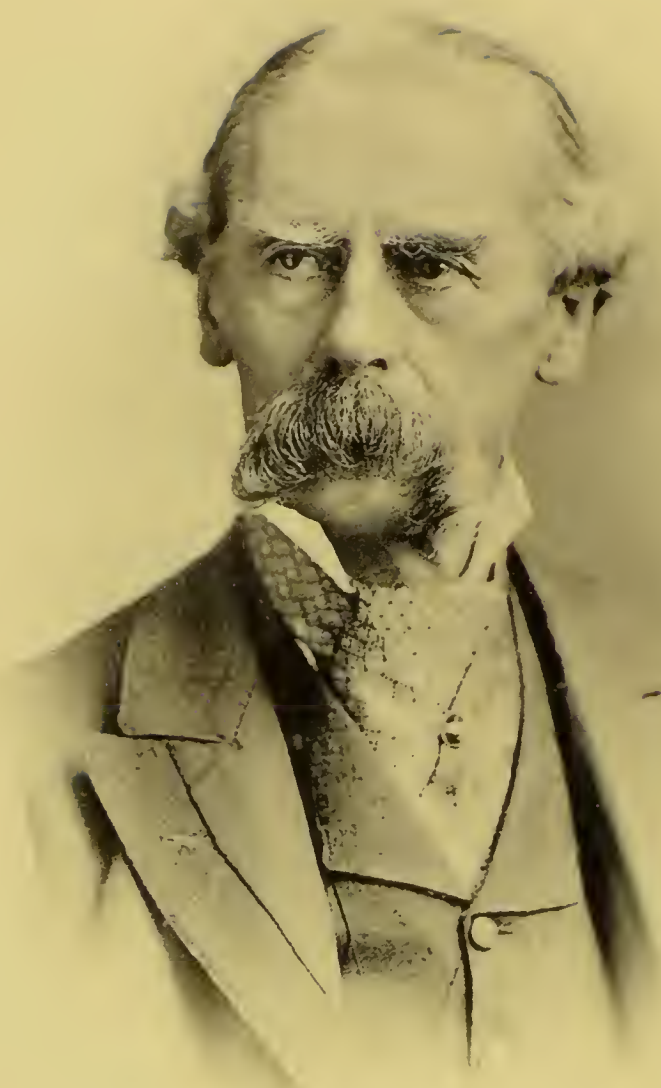
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SIR HENRY THOMPSON, BART., F.R.C.S.

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THE
FAMILY PHYSICIAN

A Manual of Domestic Medicine

NEW AND ENLARGED EDITION

VOL. II

CASSELL AND COMPANY, LIMITED

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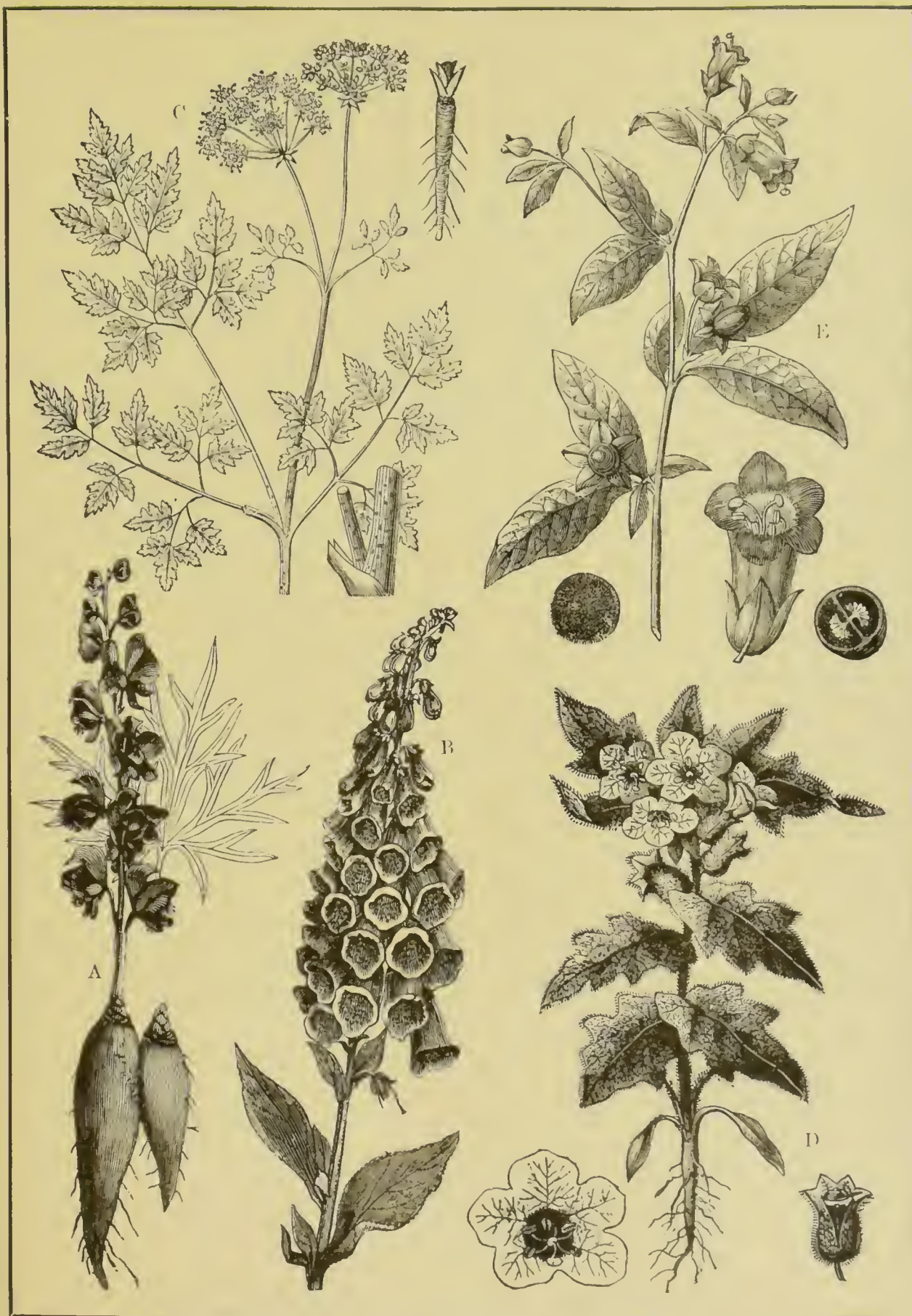
SIR SPENCER WELLS, BART., F.R.C.S.

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SIR THOS. GRAINGER STEWART, M.D.

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SOME BRITISH MEDICINAL HERBS.

A. Aconite (Monkshood). B. Digitalis (Foxglove). C. Conium (Henlock). D. Hyoscyamus (Henbane).
 E. Belladonna (Deadly Nightshade).



1



4



2



6



7

1. Pantherine Mushroom (*Agaricus pantherinus*).
2. Gripping Milk Agaric (*Lactarius torminosus*).

3. Fly Agaric (*Agaricus muscarius*).
4. Stinkhorn (*Phallus impudicus*): a. burst; b.
9. Gloom.



5. Emetic Mushroom (<i>Russula emetica</i>)	7. Matrix-bearing Mushroom (<i>Agaricus phalloides</i>).
6. Satanical Bolete (<i>Boletus satanas</i>)	8. Stump Mushroom (<i>Agaricus fascicularis</i>).
<i>Boletus luridus</i> .	



1. Chantarelle (*Cantharellus cibarius*).
 2. Milk Agaric (*Lactarius deliciosus*): a, fully-grown; b, immature

3. Truffle - *Tuber hyemale*.
 4. Mushroom (*Agaricus campestris*).
 5. Edible Boletus (*Boletus edulis*).



5. Honey Mushroom (*Hydnum melleo* (L.)
6. Yellow Clavaria (*Clavaria flava* (L.)
Hydnum repandum.)

7. Morel (*Morchella conica*).
8. Scaly Mushroom (*Agaricus procumbens*).

THE FAMILY PHYSICIAN.

VIII.—MEDICAL DISEASES (*continued*).

COLD FEET.—What a common complaint this is! and yet no one seems to know anything about it. You suffer from it for years, and yet you do not go to a doctor, or if you do you derive very little benefit from his advice. Some people suffer from it at night only, whilst others are troubled in the daytime as well. It occurs most frequently in women, but still you often hear men complain of it. We believe that the best remedy is hypophosphite of lime in one or two grain doses twice a day. This is soluble in water, and should be taken in the form of a mixture, nothing else being put with it, with the exception, if you like, of a teaspoonful of syrup, to make it more palatable, although it is really by no means disagreeable by itself. Another good remedy is *nux vomica*—five drops of the tincture in a little water three or four times a day. It is highly recommended, and you may hope for great things from it. Then you must do all you possibly can to improve the state of your general health. It is probable that you are below par somehow or other, although we must admit that it does not follow of necessity. If you feel generally out of sorts, and your appetite is poor, quinine (T. 63) will do you good. If you are pale and anæmic, you must put your faith in iron (T. 38). Parrish's Chemical Food often does good. Cod-liver oil is an excellent remedy for improving the general nutrition: many people feel quite in a glow after each dose. You should live as well as possible, and a glass or two of port wine a day will do you good. Cold bathing in the morning will quicken the circulation for you. A good brisk walk, if you are able to take it, soon warms the feet. It is a great thing to be properly shod; good stout, well-fitting boots, with thick, warm socks. If you for any reason are unable to get walking exercise, you will find that five or

ten minutes' exercise with the dumb-bells in your room before breakfast is not a thing to be despised. The hot-water bottle in bed at night is a palliative, but does nothing to effect a cure. Many people who have suffered from cold feet have assured us that they have derived the greatest benefit from putting them into cold water at bed-time. It seems a disagreeable remedy, but they say that the reaction which almost immediately follows the primary chill is delightful, and that the plan succeeds admirably. The best way would be to rub the feet quite dry with a bath-towel after bathing them, and then to jump into a warm bed.

COLIC.—Colic is a very familiar complaint. Sometimes it is known as spasm of the bowels, gripes, or belly-ache. It is characterised by severe twisting pain in the belly, especially about the navel. It comes on by fits and starts, is not stationary, but, on the contrary, moves about from spot to spot. There is no inflammation, and the pain is relieved by pressure. The disorder is accompanied by constipation, and often by vomiting; there is no fever, and no quickness of the pulse, neither is there that depressing anxiety which occurs in inflammation of the bowels, although the pain may be as severe.

Colic occurs more frequently in women than in men. It is probable that the greater sensitiveness of the fair sex, and their susceptibility to mental and moral emotions, favour the development of this complaint. It is more common in youth and adult age than in advanced life. It has been noticed that the particular temperament of the patient will confer a proneness to, or tend to give an immunity from, this complaint; those who are nervous or melancholic being more liable to it than those who are of an indifferent or phlegmatic disposition. A general condition of ill-health, or lowered vitality, predisposes to its occurrence. Those who are pulled down by over-work or anxiety, or by some chronic illness, are not infrequently sufferers. During the convalescence from fever, and after large losses of blood, colic is by no means uncommon. Excessive suckling, by lowering the general condition of health, favours its development, and the same may be said of excessive menstruation, "whites," and bleeding piles. The influence of cold in producing an attack of colic is remarkable, especially when cold is applied to the feet. There are many people who are sure to suffer from colic if their feet get wet or cold. It would seem that mental fatigue, as that produced by long-continued and great intellectual efforts, may be followed by the same result. In people whose vocations are such as to demand a

continued strain of thought, or whose hopes and fears are excited by speculation, as in commercial enterprises, and in those whose faculties are stimulated by some career of ambition, it is by no means uncommon. Among the causes of colic, one of the most frequent is the presence of some indigestible article of food in the bowels. Shell-fish, dried salt meats, pork, badly-cooked food, unripe fruit, and the like, are great sinners in this respect. That flatulence will often produce colic, especially in children, is a fact so familiar as scarcely to merit comment. The movement of gases from one part of the intestine to another will explain the shifting of the pain. Constipation is undoubtedly the commonest cause of the complaint, which is usually not relieved until the bowels are moved. Even when there is diarrhœa, it may be associated with an accumulation of irritating matter in the intestines. We shall presently have occasion to refer to a form of colic which is known as painters' colic, and is due to the presence of lead in the system. Coppersmiths, and especially the workers in copper at shipbuilding yards, often suffer from a somewhat similar condition, which may be called copper colic.

The essential and most characteristic symptom of colic is pain. This pain is marked by the occurrence of exacerbations of very great and even intense severity. It is sometimes so severe as to cause even people usually but little prone to give utterance to their feelings to utter loud cries and groans. Internal restlessness, and frequent turning and twisting of the body, characterise the sufferer from colic. Often enough he paces up and down the room, bending forwards and pressing his hands on his belly. Sometimes he flings himself on his face on the bed or sofa. When lying on his back, his knees are drawn up, and are often retained by the hands in this position. By firm pressure the pain is sometimes mitigated, or even temporarily removed. The attack is often accompanied by great general depression. The skin is cool, the face pale, and the pulse, instead of being quickened, is often slower than natural. In severe cases, sickness and vomiting may supervene; and when the malady becomes intensified and the agony excessive, the entire surface may be bedewed with a chill, clammy perspiration, the extremities becoming cold and of venous hue, and the general aspect that of collapse. Much importance is usually attributed to the slowness of the pulse in colic, for not unfrequently it enables us to distinguish between this complaint and inflammation of the bowels. It should always be remembered, however, that in very severe cases the latter condition is not unapt to supervene upon the former. When wind is the cause of the colic, the abdomen is often greatly distended; and with the expulsion

of the confined gases not only does this disappear, but the sufferer obtains almost immediate relief. A confined condition of the bowels is, as we have already shown, the usual accompaniment of colic, and not infrequently when the bowels have been efficiently acted on by medicine the pain entirely disappears. This, however, is not always the case; for, notwithstanding the action of a laxative or purgative, the pain may be persistent. In children, spasmodic pain in the bowels is often followed by digestive disturbances, and the irritation may give rise to convulsions.

The mode of onset of an attack of colic is very variable. It may come on quite suddenly, and without any apparent cause, or it may be slow and gradual in its establishment, the paroxysms being preceded by a sensation of uneasiness in the abdomen. The progress and duration of the malady are equally variable; it may, however, be regarded as a fact, that the more severe the fit the shorter will be its continuance. It may exist for days, or may last only for hours, or even minutes. It is probable that these irregularities are dependent more or less on the nature of the exciting cause. The attack is sometimes cut short by the advent of profuse perspiration, the supervention of diarrhoea, or even the occurrence of menstruation. It sometimes happens, when the affection occurs in women, that the discharge of a large quantity of pale or almost colourless urine is at once succeeded by the mitigation of the attack.

We now pass on to the treatment of colic. The great thing is to relieve the pain and get the bowels to act. In mild cases, little difficulty will be experienced in affording relief. A hot glass of brandy-and-water, a tea-spoonful of compound tincture of cardamoms in a little warm water, or thirty drops of compound tincture of chloroform, will often quickly relieve the pain. A tea-spoonful of spirits of lavender, twenty drops of essence of peppermint, or a little sal volatile, or essence of ginger or cloves, will usually prove equally efficacious. The carminative mixture (Pr. 17) is a capital remedy for colic. The soda-mint tabloids (T. 72) may be resorted to as a standing remedy. Sal volatile and carbonate of ammonia in small doses are often useful for children, especially in the case of infants tormented with colic as the result of bad feeding. In every case of colic the bowels should be thoroughly opened (T. 51). It is often advantageous to take a table-spoonful of castor oil with, for an adult, twenty-five drops of laudanum. The external application of warmth to the abdomen, as by a mustard poultice, will often prove a valuable accessory. In the case of children, a hot-water bottle wrapped in flannel—or, what is even better, a bag filled with warm

chamomile flowers—may be used for this purpose. When the colic has resulted from taking some indigestible article of food, it may be advisable to excite vomiting by the administration of an emetic of ipecacuanha, or sulphate of zinc (T. 73), or by a draught of warm water. Should the bowels still remain confined, it may be necessary to take a more powerful purgative, such as (T. 25), or a dose of salts (Pr. 25), or a black draught (Pr. 24). A large enema of tepid water will often speedily relieve the bowels, and ease the pain. A warm bath is in many cases a useful auxiliary.

In obstinate cases of colic other remedies may have to be resorted to. Thus, small doses of tincture of colocynth will often succeed when other means have failed. This remedy is especially indicated when the pains are cutting or griping in character, when they are very severe, and when they are accompanied by flatulence or diarrhœa. Ten or fifteen grains of chloral in a little water will sometimes ease the pain. Tincture of belladonna (Pr. 39) is especially useful in the colic of children. *Nux vomica* (Pr. 44) is useful when the colic is due to flatulence, and is associated with irregularity of the bowels. Bromide of potassium (T. 18) should be given in a form of colic which sometimes affects children of from a few months to one or two years of age. The walls of the belly are retracted and hard, while the intestines are at one spot distinctly contracted into a hard lump, the size of a small orange, and this contraction can be traced through the walls of the belly, travelling from one part to another. These colicky attacks, which produce excruciating pain, are of frequent occurrence, and are often unconnected with constipation, diarrhœa, or flatulence.

People who are subject to colic should be particular in the avoidance of all indigestible articles of food, and in the protection of the surface of the body from the injurious influence of cold. Wearing a piece of flannel round the abdomen, and keeping the feet well protected from damp, should be especially enjoined.

CONSTIPATION.—By constipation we mean confinement of the bowels. Not only are the stools not passed with sufficient frequency, but they are usually at the same time deficient in quantity, as well as too dry and solid. In many instances it is a mere temporary derangement, but in others the bowels are habitually confined.

There are few who have not experienced at some time or other the inconveniences of constipation. Those who suffer from it only occasionally

will be prepared to attach but little importance to it, but people with whom it is habitual know that it is one of the greatest of the minor troubles of life. It may be taken as a rule that persons enjoying robust health have a motion at least once daily. Yet there are many, apparently equally healthy, who have their bowels relieved habitually every two or three days only, or even but once in a week or fortnight. There are, indeed, cases recorded in which fairly good health has been maintained for many years, although evacuations have during that time occurred only at intervals of six weeks or two months. In one instance, that of a lady who indulged largely in opium, the bowels were opened only four times in the course of the year, at intervals of three months. It must not be forgotten, however, that a degree of constipation which is habitual with one person, and in him perfectly compatible with health, may be and often is a source of discomfort if not of positive illness to another in whom its occurrence is exceptional. Thus, to most people whose daily habits in this respect are regular, confinement of the bowels for even two or three days is apt to produce not only local uneasiness, such as a sense of fulness, heat, tendency to piles, and flatulence, but also some degree of general constitutional disturbance, indicated by headache, foul breath, loss of appetite, and indigestion. Even in cases where from long habit constipation has come to be regarded as the normal condition of things, some of the above-specified discomforts do actually in some degree co-exist; but having become, like the constipation, habitual, they cease to be observed, or at all events become tolerable. When a motion occurs after the bowels have been long confined, the expulsion of the *fæces* is apt, from their bulk and hardness, to be attended with considerable pain, and perhaps even with some loss of blood, and to be followed by prolonged aching and burning.

What are the causes of constipation? Of all the causes which originate and establish habitual constipation, there is undoubtedly none so common as inattention to the calls of Nature, which are too frequently not only ill-obeyed, but even set aside by every trivial circumstance. How often does it happen that a lady, finding it not quite convenient to retire to the cabinet at the moment she experiences an admonition, defers it to a more favourable opportunity, but this opportunity having arrived, her efforts are powerless, the bowels will not act, and she has perforce to abandon the effort, and retire from the contest disappointed and discomfited. It should be remembered that the evacuation of the bowels is a natural and necessary function, without which health cannot be enjoyed or preserved, and some resolution should

consequently be exercised in order to promote this object. Some people never think of going to the closet unless urged by an imperative necessity which they cannot resist.

The want of proper conveniences has undoubtedly much to do with the prevalence of constipation. As a rule, little or no attention is paid to the situation and construction of the water-closet. It is either placed in some out-of-the-way corner, where no one can find it, or it is so prominently situated that it requires a vast amount of manœuvring to pay a visit without the fact being patent to everyone in the house. Not uncommonly in the country it is a long way off, quite at the bottom of the garden, and very likely you have to walk right past the dining-room windows to get to it. Instead of being a bright, cheerful little chamber, where you might pass five or ten minutes with a certain amount of comfort, and moralise on things in general, it is a cold, damp, repulsive room which gives you the shivers even to look at.

It too frequently happens that the pleasures of a country visit are completely neutralised by the difficulty in attending to the bowels. If you ask a friend to come and stay with you, one of the first things you should do should be to explain to him the "anatomy of the place." In most country houses of any pretensions they put up elaborate notices telling you all about the times the post goes out, and so on, but they never give you any information respecting the situation of the water-closet, a very much more important matter. In every visitor's room there should be placed plain, straightforward directions for finding the w.c.

In the construction of houses, too much attention cannot be given to determining the situations in which the water-closets are to be placed, in order that the access may be easy and the egress private. In many houses there is only one water-closet for the whole family. There should never be less than two, and it would be a good thing if one were reserved exclusively for ladies. People put themselves to a vast amount of expense in fitting up apartments and providing entertainment for their friends, but they too often neglect the one thing which is so essential for their comfort and well-being.

Want of exercise is a very common cause of constipation, especially in the case of women. Ladies may take a formal walk once a day, but they seldom do much more. The upper classes residing in town get very little muscular exercise, except in dancing, the use of the legs being almost entirely superseded by the carriage. Considering the inactive life led by the majority of women above the station of domestics, one

feels no surprise that the bodily functions are ill-performed, but rather wonders that the consequences are not more serious than they are. In spite of want and privation, we find that the majority of girls in the lower classes of society are well-formed, whilst the rich and well-to-do are often weak and puny. Many a kitchen-maid has a physique that a duchess might envy.

A man or woman, to keep in "good form," should have, at least, a couple of miles brisk walk every day, or its equivalent in some other form of muscular exertion. Some people require very much more. Dawdling about in the street and looking in the shop-windows does very little good; what you want is a good sharp walk that will bring the colour up in your cheeks, and make you feel in a glow all over. That is better than pills.

Mental anxiety is another cause of constipation. In proof of this we find that many people while actively engaged in business experience considerable difficulty in regulating the bowels, but as soon as they get away in the country, and emancipate themselves from worry and anxiety, the mind recovers its cheerfulness, the spirits their wonted elasticity, and the bowels resume their normal condition.

Literary pursuits are said to be eminently favourable to the development of constipation. There are many writers who, partly from want of time, and partly from the sedentary nature of their habits, seldom have the bowels relieved oftener than once a week.

Travelling has usually the effect of discouraging the action of the bowels, and not unfrequently it gives rise to considerable inconvenience by the production of constipation. A confined state of the bowels always increases the sensation of feverish heat which many people experience when making a prolonged journey in a close railway carriage.

The abuse of purgatives may lead to constipation. The number of aperient pills which some people are in the habit of taking is very great. Instead of passing away with the action of the bowels they have been taken to accelerate, they sometimes stick together and form a considerable obstruction.

The consequences of habitual constipation are often most serious. They, of course, vary somewhat in different cases, and depend materially on the length of time the constipation has existed, and on its degree. Habitual confinement of the bowels extending over a period of some years, will naturally generate a train of evils more serious in character than when the habit has existed for only a few weeks or months. At first, the inconveniences experienced are comparatively trivial, and are

not of such a nature as to cause anxiety or to attract much attention. Even when the general health has distinctly suffered, the indisposition is usually attributed to anything but the true cause. Among the earliest symptoms are drowsiness, and heaviness of the head. A dark rim appears under the eyes, and by-and-by the patient suffers from an aching, or beating, or throbbing pain in the forehead or temples, or over one eye with a sense of weight or giddiness. Flushings of the face occur, and transient sensations of heat are experienced over the whole body, though the feet are at the same time cold. The drowsiness after a time increases, and the sufferers usually find it difficult to rouse themselves to any kind of exertion. On going to bed they fall instantly into a sound sleep which proves heavy but not refreshing, for on awaking in the morning they feel tired, and unwilling to leave the bed, and if they do not at once get up sleep quickly overcomes them, only to increase the sense of fatigue on again awaking. The menstrual functions may become deranged, and there is often a copious white discharge. The appetite is not usually impaired, although flatulence is a frequent consequence. These symptoms quickly subside when the cause is removed, and it is only necessary to restore the action of the bowels in order to re-establish the health.

When constipation has existed for a longer period, the symptoms assume a more serious character, and are less amenable to treatment. The general health suffers more seriously, the mind becomes irritable and apprehensive, noises jar and distract the brain, and strong light overpowers the eye, while, at the same time, the delicate sensibility of these organs is dulled, and the senses, though morbidly alive to powerful impressions, are no longer adapted to acute and nice perception. The pain in the head increases, it assumes a distracting character, and is often compared by sufferers to the opening and shutting of the brain. In some cases this has ended in apoplexy.

Among the more remote consequences of constipation are sick headache, indigestion, pain in the stomach, waterbrash, colic, irritation of the sexual organs, irregularity in the functions of the womb, etc. Many mental diseases, more especially hypochondriasis and melancholy, may be traced to the same cause. Moreover, the accumulation of feces in the lower bowel may give rise to much local trouble, and may be the cause of piles, falling of the bowel, itching about the anus, and other mischief.

In the general treatment of disease, it often happens that medicines fail to exert their peculiar and specific action when the bowels are

obstinately confined. Under these circumstances the preparations of iron frequently disagree, and we may look in vain for the narcotic influence of opium.

We have, we think, said enough to show that constipation is not a thing to be desired. As we have said, it has been laid down as a rule that every robust, healthy person, should have a motion once in the twenty-four hours, but to this there are many exceptions. Some people have habitually two or three evacuations daily, others only every second or third day. These peculiarities should be respected. The less frequent action of the bowels in particular individuals is not properly a state of constipation, the dejections being of a healthy character, and not having undergone those changes of dryness and hardness which usually occur when so long retained. It is obvious that it would be unwise and officious to interfere, seeing that not only no inconvenience, but absolute benefit, results from the habit. This refers only to cases where the motions are copious, free, and natural in colour and consistence.

What is the treatment of habitual constipation? Purgatives? No, certainly not! Purgatives may do very well for accidental constipation—constipation, that is, occurring once in a way; but for habitual constipation they not only do no good, but often, if continued, prove extremely prejudicial. What we want is not to give remedies, which merely act upon the bowels, but to employ means to correct the derangement upon which the constipation depends.

Early rising favours the natural action of the bowels. By early rising we mean rather the avoiding a second sleep in the morning than getting up at any specified hour. From the difference of habit in different classes, and of those who reside in town or country, the hour which is early to one may be late to another, and *vice versâ*. It is the lingering in bed, the going to sleep a second time after having enjoyed a good night's rest, that does the mischief. A person awakes refreshed, light, and cheerful, but if instead of at once getting up he dozes off to sleep again, he afterwards rises with unwillingness, and finds his head heavy, his spirits dull, and his bowels indisposed to act.

A very important point in the treatment of constipation is the habit of regularly paying a visit to the closet at the same time every day. Immediately after breakfast usually affords the most favourable opportunity. You are then in less of a hurry and bustle, and can afford to devote more time and consideration to the subject. Get up directly you wake, turn into your bath, and have a good sponge, then dress—no sitting about in your dressing-gown—have your breakfast, take your paper, and your

pipe if you like, and retire for a good ten minutes or a quarter of an hour. It may be that you feel assured that your visit will be unproductive, nevertheless go. You may be unsuccessful to-day, and perhaps to-morrow, but in time you will succeed. At all events you will have the satisfaction of knowing that you have done your duty. After a few weeks you will in all probability find that your bowels act with the regularity of clockwork.

Defæcation is an important matter. It is not a thing to be done in a hurry. Many of us spend an hour over dinner, and never grudge the time, but five minutes spent over an equally important matter is all too long. Many people rush to the closet, and if Nature is not prepared to relieve herself at the very instant, they never think of allowing her even a minute's grace, but simply get up and come away again; and the consequence is that they suffer from constipation and all its attendant evils—and serve them right too. Attention to a few little points in the regulation of the diet will accomplish much in constipation. Coarse brown or bran bread, oatmeal cakes, or porridge, often prove efficacious, and figs, prunes, or ripe fruit, may be taken with benefit. An orange or two eaten before breakfast is a pleasant and often effectual way of overcoming moderate habitual constipation, and sometimes, indeed, this simple plan will cure the more obstinate forms. A glass of cold water before breakfast, and an orange or two soon after, is another excellent mode of treatment. With many people coffee acts as a slight purgative, and where the patient has been accustomed to take tea at breakfast it may be substituted with advantage. Bacon, either broiled and eaten hot, or boiled and eaten cold, at breakfast, is a useful auxiliary in regulating the bowels. It often happens that people who are bilious and quite unable to take rich dishes, eat bacon not only without unpleasant consequences, but with decided advantage. Of drinks, beer and cider are the best suited to constipated habits.

It is not always easy to avoid going beyond or falling short of our aim. To produce diarrhœa is not to cure constipation, and is only substituting one disease for another. It is a good plan in cases where the walls of the abdomen are relaxed to give them artificial support. Wearing a broad bandage firmly applied round the body often proves of service, especially in women. Change of scene, to those who suffer from habitual constipation, has often a marked salutary effect. Exercise must also be considered as a mode of treatment.

So far we have said nothing on the subject of drugs, but if the above measures prove inoperative they will have to be resorted to. It

is best to avoid anything in the shape of strong purgatives. One of the anti-constipation tabloids taken the first thing in the morning before breakfast will usually afford relief. Should this fail, take in addition a small dose of hashra tea at bed-time. The advantage of this medicine is that you can regulate its action to a nicety by allowing the drug to infuse for a longer or shorter time. If a very mild action is required, five minutes will suffice; but if the bowels are very obstinate, it may require half an hour or even longer to infuse. If any inconvenience is experienced from the leaves floating on the water, the tea may be made in a little Japanese tea-pot, fitted with a strainer. Do not expect an immediate result, for these remedies are not active purgatives. Go on taking them steadily, and the desired result will be obtained not by setting up diarrhœa, but by establishing a healthy condition of the intestines and of their secretions.

A drop of tincture of *nux vomica* (T. 57) taken four or five times a day, or a tea-spoonful of the mixture (Pr. 44) is very useful in some forms of habitual constipation. As our knowledge of the action of *nux vomica* in its relation to constipation is at present imperfect, the results appear to be capricious. It is as well, therefore, not to be too sanguine of success, for in some cases it answers beyond all expectation, while in other apparently similar cases it completely fails. It is usually found of most service when the habitual constipation is accompanied by frequent ineffectual efforts, and when there is morning headache. It is especially useful when the complaint is associated with indigestion resulting from the excessive use of alcohol, tobacco, or coffee. It is also recommended for persons who take too little exercise, and for students and literary men.

Trousseau, the eminent French physician, recommended the use of belladonna in constipation. In one of his lectures he says: "I give it in the form of pills, each pill containing a centigramme (equal to about one-sixth of a grain) and as much of the powder of belladonna; one of these pills is taken daily, fasting, by preference in the morning on an empty stomach rather than in the evening; the number of pills may be increased from one daily to two daily within the first five or six days: they ought seldom to exceed four or five in the course of the twenty-four hours. Whatever number of pills are taken they ought always to be taken at one time. As soon as the stools become regular, the belladonna must be discontinued, and the organs be allowed to act without assistance." Any intelligent chemist would be able to make these pills, or at all events he would supply the belladonna tabloids (Pr. 9), which will answer just as well. It has been found by English

medical men that this treatment is useful in all forms of constipation co-existing with indigestion, characterised by a thinly-furred tongue, pain at the pit of the stomach, especially after food, and more or less headache. It ensures a natural evacuation daily, and must be continued for a fortnight or three weeks. Trousseau, whilst recommending this treatment, adds: "By calling to mind the similarity of the properties of belladonna and tobacco, you will see how it is that many men cannot go to stool unless they smoke a pipe or cigar immediately after a meal. Although, at least in our country, it is not considered very proper for women to smoke, I almost every week advise ladies to try the effect of smoking a tobacco cigarette, to aid in overcoming constipation which had proved inveterate under every hygienic treatment."

In many cases of constipation dependent on torpidity of the bowels, relief may be obtained by taking one grain of powdered ipecacuanha every morning while fasting. The same treatment will remove the indigestion frequently associated with constipation, and characterised by depression of spirits, flatulence, coldness of the extremities, and the food lying like a weight on the stomach. Sulphur taken in the form of the confection (Pr. 59) or tabloids is very useful, especially when the patient also suffers from piles or skin diseases. Senna may do well, particularly if given with gentian or some other bitter tonic (Pr. 16). Aloes in many cases prove highly useful, especially when given in the form of the dinner pill (Pr. 65).

In the treatment of the constipation of old people, drop or half-drop doses of tincture of opium (T. 49), given every quarter of an hour for the first hour, and then hourly for three hours, have been recommended. It must be remembered, however, that daily evacuation, which is the rule in youth and middle life, is often an excess in advanced years, when a motion three or four times a week usually proves ample. Old people often trouble themselves needlessly on this point. Laudanum is especially indicated when there is complete torpor of the bowels, when the motions are hard and lumpy, and there is headache, drowsiness, or dizziness.

In habitual constipation it is often necessary to resort to the use of some of the natural waters, such as those of Carlsbad. The imported Carlsbad water acts well. It should be warmed to a temperature of from 100° to 110°. The patient should begin with three tumblerfuls, and gradually increase the number to four, five, or six, according to the action. It should be taken before breakfast. It usually causes pulpy slimy stools of dark colour and offensive odour. They are generally

frequently repeated, and the quantity is often so great that the patient expresses his astonishment, and often wonders where it all comes from. The treatment will have to be continued for three weeks or a month. In some people it produces very little purgative action. The beneficial effects are more marked when dietary is adopted similar to that enjoined at Carlsbad. The Franz Josef natural aperient water, or the Pullna or Friedrichshall waters are often used with advantage in constipation.

In many cases the use of an enema or injection proves of the greatest service. Unirritating in its operation, and acting directly on the seat of obstruction, an injection is far preferable to the administration of strong drugs, which derange the whole alimentary track and excite violent action, only in many cases to induce a state of greater debility and torpor than existed in it before. It matters little of what the injection is composed—either hot or cold water or gruel or starch may be conveniently used.

CONSUMPTION.—Consumption, or phthisis, as it is technically called, is an affection of the lungs accompanied by general wasting. There is no doubt that consumption is hereditary, though probably not to the extent that is commonly supposed. It does not follow of necessity that because a person comes of a consumptive stock he will suffer from that affection. By some authorities it is considered that the disease itself is transmitted, whilst others think that it is only a general weakness or constitutional debility that is hereditary.

Most cases of consumption occur between the ages of twenty and thirty. The disease is not often observed in early childhood or in old age, but it may come on at any period of life. It occurs with nearly equal frequency in men and women.

People whose general health is below par are the most likely to become the subjects of consumption. Those who have a consumptive tendency should scrupulously avoid anything at all likely to weaken them. Nevertheless, cases commencing with spitting of blood may originate in those whose health is a model of excellence.

There are certain occupations which predispose to the occurrence of consumption. It is common amongst stonemasons, grinders and polishers of steel, dressers of flax and feathers, straw plaiters, iron and coal miners, tailors and sempstresses. In many of these the inhalation of foreign particles into the lungs sets up irritation, which proves injurious and deteriorates the constitution; in others the result is occasioned by the

combined operation of sedentary employment, impure air, exhaustive work, and bad food. On the other hand, cooks, butchers, tanners, tallow-chandlers, and soap-boilers, enjoy to a great extent an immunity from this terrible scourge. They get good wages, and as a concomitant have plenty to eat and drink, whilst the constant contact with oil and fat is probably not without its influence. A consideration of these facts may in some instances be of service in deciding on the choice of an occupation.

Sedentary habits and want of exercise, intemperance in any shape or form, excessive indulgence and debauchery of all kinds, powerfully influence the development of phthisis, especially in the young.

Imperfect digestion, and the resulting mal-nutrition, favour the occurrence of the disease. It is probable that a bad set of teeth, by preventing the proper mastication of food, is not without its influence. Some doctors lay great stress on a deficiency of fat in the system, as a cause of consumption. It is an undoubted fact that most consumptives have a great dislike to fat, and will not eat it unless absolutely made to do so.

Want of proper ventilation and fresh air undoubtedly tend to produce this disease, hence its frequency amongst those whose occupations compel them to remain shut up in the same room for many hours at a time. It is of common occurrence in ill-ventilated institutions where many people are gathered together. For the maintenance of health a liberal supply of pure fresh air is essential.

It has always been a disputed point whether the practice of wearing stays favours the development of consumption, but the weight of evidence goes to show that it has no such tendency.

It is an undoubted fact that consumption is more frequent in temperate climates than in very cold or very warm ones. It is by no means common in Russia and Canada, notwithstanding the long continued cold, nor is it prevalent among the nations of the tropics. Some favoured spots are stated to be free from phthisis, for example, the islands of Lewis and Mull among the western isles of Scotland. In Ireland too the disease appears to be singularly rare. Probably the most antagonistic influence to the existence of consumption is exercised by the climatic conditions of extreme altitudes. We are told that in localities in the Andes, 7,000 feet and upwards above the sea-level, where the air is dry, the temperature about 60° in the shade, and the sky sunny throughout the greater part of the year, consumption of the lungs is known only as an exotic.

There is strong evidence to show that humidity of the air exerts a

powerful influence in the production of consumption. It is undoubtedly common in Holland and other countries liable to damp fogs and an atmosphere saturated with moisture. In many towns in England the death-rate from consumption is in inverse proportion to the dryness of the site. By many it is considered that a judicious system of sub-soil drainage would in time almost stamp out our national malady.

Severe mental depression, as from anxiety, grief, or over-study, seems to have considerable influence in some cases. Phthisis is by no means uncommon among the inmates of lunatic asylums.

Phthisis may follow other diseases, such as measles, and typhus or typhoid fever, scarlatina, and repeated attacks of bronchitis. In some instances it is probably set up by over-suckling. On the other hand anæmic girls rarely suffer from it, though they are often supposed to be consumptive. The poorness of blood appears to have a kind of protective influence.

Is consumption contagious? Yes, undoubtedly in a sense. Not to the same extent as scarlet-fever or whooping-cough, but still it is infectious. If a wife is shut up in a close hot room for weeks together nursing a sick husband in an advanced state of consumption, she is not at all unlikely to contract the disease. The sputum is distinctly infectious, and it has been found that it retains the property for many months. The danger of inhaling dust which has become infected by the expectoration of consumptive people is well known. Another great source of danger is drinking milk obtained from a tuberculous cow, whilst the risk of eating tuberculous meat has long been recognised.

Hospitals for consumptives in densely-crowded neighbourhoods are a source of danger, and should not be supported by the public.

The public vehicles—such as omnibuses and tram-cars—in the neighbourhood of hospitals for consumption are veritable death-traps, from the contamination of the straw or matting due to the contagious expectoration of the out-patients.

The mortality from consumption is enormous. It exceeds that of all the fevers put together. Epidemic diseases of all kinds now kill only about 45,000 persons annually in England and Wales, but consumption carries off no less than 70,000. It is a terrible scourge, but there is not the slightest doubt that much of this mortality could be prevented. It is well known that attention to general sanitary measures checks the spread of the disease. Deep and thorough drainage of the sub-soil by removing damp, speedily reduces the mortality in towns and districts. Ventilation is equally important. The measures which so enormously

reduced the death-rate in the army between the years 1854 and 1868 were the better drainage and ventilation of the barracks. The Public Health Acts of 1868 and 1875 have resulted in the saving of 30,000 lives a year from this disease alone.

The general symptoms of consumption are cough, expectoration, spitting of blood, shortness of breath, night-sweatings, and general wasting. Some or all of these are usually present; there are other symptoms which are of occasional occurrence, and will be considered in due course.

Cough is usually one of the earliest symptoms of consumption, and is that which commonly first attracts the attention, and awakens the fears of the patient or his friends. Usually, to begin with, it is slight, occasional, and only occurs on getting out of bed in the morning or making any unusual exertion in the course of the day. Sometimes it will cease for a while, as in the warm weather of summer, and return in winter, or on the approach of cold weather. After a time it begins to be troublesome at night, and is attended with more or less expectoration of mucus. The gradual onset of a cough in this way is in itself a suspicious circumstance; it may mean nothing, probably does mean nothing, but still, as a matter of precaution, we should advise you to go to a doctor and get your chest examined. It is very likely it is all stomach, but if there is any doubt there is nothing like being on the safe side. In chest complaints it is of vital importance to begin treatment at the earliest possible moment.

The expectoration in phthisis varies greatly both in quantity and character. Some patients inquire most anxiously of the doctor if he is quite sure that what they are spitting up contains no pus. This is a matter of little importance, for the presence or absence of pus in the sputa affords no test at all of the presence or absence of consumption.

Spitting of blood is observed to a greater or less degree in the majority of cases of phthisis, varying, however, considerably as regards the amount and the frequency of its occurrence. The bleeding is frequently, but not of necessity, brought on by an attack of coughing. When the blood occurs in mere streaks, or in quantities less than a tea-spoonful, it probably means nothing, and is of little consequence. People are often greatly and unnecessarily alarmed by expectorating a small quantity of blood that could under no circumstances be of the slightest moment. In any case in which more than a tea-spoonful of blood is spat up, you should consult your doctor. Moreover, even when the quantity is smaller, and you feel anxious or not quite easy about it, you had better obtain medical advice.

Shortness of breath, although generally present to a greater or less extent, is not a very important sign of phthisis. Many people—anaemic girls especially—readily get out of breath on exertion, and yet their lungs may be perfectly healthy.

Night-sweating is often a most distressing symptom, and is especially injurious by disturbing the rest and exhausting the strength. It seldom comes on in the day-time, but the patient awakes in the middle of the night sweating profusely, and perhaps drenched in perspiration. Sometimes the quantity is so great that it wets not only the flannel and night-shirt, but even the sheets.

Wasting is a symptom of very frequent occurrence. If a person loses a few pounds, then regains it, then loses it again, and so on, it is of very little importance; but when there is progressive emaciation, it is a serious sign. It is often one of the earliest, as it is one of the most alarming symptoms the patient presents. If a person without any apparent cause grows thin and weak, and gets no better from rest and change of air, he should consult his doctor, especially if there is any cough.

In consumption there is always fever: the temperature is distinctly elevated. If you take your temperature morning and night on several consecutive days, and find that it is never above 99°, you may be pretty sure that you are not consumptive: or, at all events, that there is no active mischief going on in your chest. Taking the temperature is one of the best methods of proving the absence of consumption. The pulse is usually quickened in proportion to the elevation of temperature. If your natural pulse is, say, 70, and you find it continually above 90, and there is nothing that you know of to account for it, it is a suspicious sign. If, on the other hand, your pulse, especially at night, is normal in frequency, there is probably no fever.

Pain about the chest is sometimes met with in phthisis, but it is by no means of constant occurrence. It is usually a dull, aching pain that is complained of, and it is often referred to the region just under one or other of the collar-bones. When the pain is a sharp “stitch in the side,” there is probably a little pleurisy just at that spot. A little localised inflammation of the pleura or covering of the lung often occurs in the course of phthisis, but it is of no great moment, and with appropriate treatment usually passes away in a day or two.

Diarrhœa is not of unfrequent occurrence in consumption, but it is not usually an early symptom. It is essential that it should be checked as soon as possible.

Loss of hair is a common symptom of phthisis. Women often tell you that their hair comes off in handfuls. It must not be supposed that this symptom by itself is of the slightest value—other and more decided signs of the malady are always present. We recently had a patient under our care with lung mischief who in a few weeks lost an abundant crop of hair that had for years grown on his chest.

Absence of the catamenia is another symptom often met with, especially in advanced cases.

A clubbed or thickened condition of the finger-nails is also common. It is worth looking for, for it is a favourable sign, indicating that the progress of the disease has been and is likely to be slow.

A red line along the margin of the gums where they meet the teeth is not unfrequently seen.

Such, then, are the symptoms of phthisis. If you suspect, or have any reason to suspect, that there is anything wrong with your chest, go to a doctor. If there is nothing the matter, it will remove a harassing doubt and a feeling of uneasiness that might in itself in time prove prejudicial to your health. You must remember that the doctor will have to examine your chest, and you must, of course, be prepared for that. He can do you no good unless you let him go thoroughly into your case.

Is consumption curable? Undoubtedly, in many cases. In days gone by it was laid down as a law by learned pundits that any medico professing to cure consumption was a charlatan. Thank God! those times have passed away, and we no longer regard consumption with the same hopeless horror we used to. A person may be consumptive, and live on for ten, twenty, or thirty years, or even longer. Cases of arrested consumption are nowadays by no means uncommon. Modern treatment will save a life that a few years ago must have been sacrificed.

In every case of consumption it is essential that a doctor should be consulted without delay. The phases of this disease are so many, and the symptoms vary with such frequency, that he will have to be seen often if any good is to be done.

A few words, then, respecting the treatment of consumption. If there is much fever, the temperature being, say, 103° or 104° every night, begin with the effervescing ammonia mixture (Pr. 99); two table-spoonfuls are to be taken every four hours during effervescence. The addition of five drops of antimony wine to each dose is advantageous.

The chest and back should be painted with iodine liniment, which is not to be rubbed on, but applied with a small brush. If you know that

only one lung is affected, the application should be confined to that side. If it is only the apex or upper part of the lung that is damaged, the paint should be put on above and below the collar-bone, and over the shoulder-blade only. It must be remembered that the iodine liniment is a strong preparation, and that if you put it on too thickly it will bring all the skin off. It ought to cause a fair amount of pain and smarting, or it will do no good. For children and young people, the weaker tincture of iodine may be used, but it is not so valuable a remedy. As soon as one coat of iodine clears off—and it will disappear in a few days—put on another.

The effervescing ammonia mixture will have to be taken for a week or ten days, and then the temperature will probably be lower. You must then take cod-liver oil. The dose to begin with is a tea-spoonful three times a day. It may be given alone or in milk, or weak brandy-and-water, or orange wine, or coffee, or anything you like best. The great thing is to float it on the top of the liquid, so that it does not touch the sides of the glass, and then you can toss it off without tasting it. Many people can take it floating on the gentian and soda mixture (Pr. 14) when they cannot take it in any other way. It should always be given soon after meals, and never before, or it will spoil the appetite. If any difficulty is experienced in taking cod-liver oil, the Kepler extract or the Kepler solution of malt and cod-liver oil should be taken. The dose is a tea-spoonful in milk three times a day, immediately after meals.

In addition to the cod-liver oil, a table-spoonful of the following mixture should be taken twice a day:—

Hypophosphite of lime, thirty-two grains.

Syrup, one ounce.

Water, seven ounces.

Make a mixture. Dose, a table-spoonful twice a day.

Should any difficulty be experienced in getting this prescription dispensed, take a tea-spoonful of syrup of the hypophosphites three times a day, after meals.

If the cough is troublesome—and especially if it is a short, dry, and hacking cough—take a tea-spoonful of the morphia linctus (Pr. 56) occasionally. Other remedies for cough will be found under that heading (*see* COUGH); but we think you will have no reason to be dissatisfied with the one we have recommended.

If there is much night-sweating, take one or two of the oxide of

zinc pills (Pr. 66) at bed-time. Should they fail to afford relief, you may, after three or four nights, substitute ten grains of compound ipecacuanha powder—two of the tabloids (T. 39)—which will probably prove successful. There are many other remedies for the night-sweating of phthisis, and they will be found enumerated in their proper place. (See NIGHT-SWEATING.)

Should there be any bleeding, turn to the article on BLOOD-SPITTING and you will see what to do.

For diarrhœa, a mixture of equal parts of decoction of logwood and chalk mixture usually proves successful. The dose is two or three table-spoonfuls every four hours. In obstinate cases large doses of carbonate of bismuth often succeed admirably. Thirty grains—six of the tabloids (T. 13)—may be given at a single dose, suspended in milk. Sometimes a number of remedies will have to be employed before the diarrhœa can be stopped. The article on that subject should be consulted. (See DIARRHŒA.)

Should there be pain under the collar-bones, or a stitch in the side, the application of the iodine paint will do as much good as anything. It is an excellent remedy, and ranks high in the treatment of consumption.

A blister, too, is useful. One may be placed under each collar-bone. They should not be larger than a two-shilling-piece, and should be kept on for from seven to eight hours. The blister need not be cut, but should be covered with a layer of cotton-wool. The fluid in the blister will be partly re-absorbed, and by not cutting the bleb you prevent the access of air to the raw skin beneath. These small blisters are not at all painful; and, in fact, many people say they hurt less than a coat of iodine.

The use of the cod-liver oil and the syrup of the hypophosphites will have to be continued for many months—in fact, till the prominent symptoms have entirely disappeared. The dose of the cod-liver oil may gradually be increased from a tea-spoonful to a table-spoonful; but beyond this it is seldom necessary to go. The hypophosphite may be occasionally omitted for a day or two, and it should not be taken when there is any spitting of blood.

Arsenic is a good remedy in consumption, especially in chronic cases. A dose of arsenic—one or two of the tabloids (T. 7)—should be taken four times a day, shortly before meals. It may have to be continued for some weeks, or even months, and it may be some time before any improvement becomes manifest. Should it cause sickness or diarrhœa,

its use should be suspended for a few days; and then, when resumed, it should be taken after meals. In some cases it is necessary to reduce the dose or frequency of administration for a time.

When cod-liver oil cannot be taken, or the repugnance to it cannot be overcome, the various preparations of Kepler extract will be found useful. (See List, page 151.) When much difficulty is experienced in assimilating fats, it is by no means a bad plan to rub into the chest night and morning some such preparation as neatsfoot oil, lanolin, or Chatteris oil.

A remedy called Chaulmoogra oil has been used as a remedy for consumption. It is expressed from the seeds of a tree known as *Gynocardia odorata*, and is said to have been known for years to the Fakirs of India. The dose is from two to twelve drops in a little cod-liver oil, two or three times a day. The oil is semi-solid at the ordinary temperature of the atmosphere, but soon liquefies if held in the hand or placed in tepid water for a few minutes. It can be obtained without difficulty, and is sold in capsules, which disguise its somewhat nauseous taste. When not readily taken internally, it may be well rubbed into the chest and back before the fire every night and morning. In this way about two ounces will be consumed in the course of the week.

Respecting the Koch treatment of consumption and other diseases of a tubercular nature, it is very difficult in the present state of our knowledge to offer an unbiassed opinion. The whole subject has been discussed with much unnecessary warmth both in the medical and lay papers. The scientific question has been to some extent obscured by ethical considerations which have no bearing on the subject. There are, however, certain facts which stand forth prominently, and which, fortunately, are of a practical nature. In the first place, there is no difficulty in obtaining the remedy. *Tuberculinum Kochii* is supplied to medical men just as freely as vaccine lymph. It is supplied only in "original bottles." In all cases it is used hypodermically—by injection, that is, under the skin. It is usually diluted with a half per cent. solution of carbolic acid. The solution will not keep, and not more should be prepared than can be used in a few days. Any solution which has assumed a turbid appearance is unfit for use, and should be thrown away. The initial dose should not exceed one-tenth of a grain; but this may be gradually increased. At first the injection should be given only once a day. The syringe used should be disinfected each time, both before and after use, with absolute alcohol. The treatment should not be undertaken at a time when the patient is spitting blood. The injection should, as a rule, be made early in the morning, and the temperature should be taken

every three hours during the day. Before the commencement of the course the patient should be accurately weighed, and the sputum should be examined for tubercle bacillus.

Of late a very important modification of this treatment has been introduced. Professor Klebs, by a most ingenious method of research, has separated the albumose—which is the remedial agent of Koch's tuberculin—from the principles which produce dangerous effects. The substance so obtained is known as Klebs' tuberculocidin. This tuberculocidin is not simply a dilute tuberculin, but has special properties of its own. It has been used in a large number of cases of consumption, and the results are undoubtedly in many cases most satisfactory. It is hardly necessary to say that certain definite rules have to be followed in administering it. It is always injected under the skin, and it is recommended that what is known as an Overlach syringe should be used for this purpose. The syringe must always be disinfected by washing with absolute alcohol, both before and after using. The needles must be kept free from rust by smearing them with vaseline. The first dose should not exceed one-thirtieth of a grain; but this may be gradually increased to a grain and a third. The majority of patients require twenty-five injections, but more may be necessary. The pain of the injection is usually slight, but should it be severe cocain may be used.

In many cases it is a good plan to use a combination of tuberculin and tuberculocidin, beginning with one-three-thousandth of a grain of the former and one-tenth of a grain of the latter. The best results are obtained by a combination of Koch's and Klebs' methods.

The diet of the consumptive should be simple and nutritious: very strict rules as to special articles of diet are uncalled for, unless the stomach should have exhibited signs of imperfect power. Meat should be taken once or twice a day, with a good allowance of fat. Fish is nutritious, especially oysters. Milk is very nourishing, and two or three pints of milk peptonised with zymine powders may be taken in the course of the day. At many hospitals for consumption the patients have a glass of rum and milk the first thing in the morning before breakfast, to help them to dress, and undoubtedly it often does good. Asses' milk may be taken when ordinary milk disagrees. Another favourite prescription is fat bacon for breakfast. Sugar is very fattening, and there is no objection to taking it, even in considerable quantities. A moderate allowance of wine or spirits is advisable; but it should be taken with caution when it flushes the face or quickens the pulse.

Raw meat is very useful in consumption, especially when the appetite

is bad, or the digestive powers are failing. It sounds very nasty, but is not so in reality. What you have to do is this:—You get about half a pound of rump-steak—it must be quite fresh—and then cut away the fat and gristle and tendon, if there should be any. Then you get the pudding-board and a sharp knife, and scrape the meat into a pulp. It is rather hard work, and makes your arms ache; but you must not mind that. As you scrape off the meat you will look out for the little white pieces of tendon, and carefully remove them. It is very nasty if it is stringy. Now put your pulp into a mortar, and bruise it well for a few minutes. Next spread it out between pieces of bread-and-butter, and let your patient eat it as a sandwich. It is more palatable if you add a little pepper and salt. Some people like a little butter with it; it removes to some extent the nasty red colour, but it rather increases the difficulty of digestion. The addition of a little mace and allspice is a decided improvement. It is an advantage, too, to vary the flavour from time to time. When the patient cannot take it in the form of sandwich, it may be mixed up with soup and taken that way.

Moderate and frequent exercise in the open air is essential. An old writer says:—"Bark is no surer cure for ague than riding is for phthisis." This is not literally true, but still the opinion is worth quoting. Walking is capital exercise, and swinging on a horizontal bar is frequently beneficial. Gentle gymnastic exercise—the so-called musical gymnastics more particularly—and the use of light dumb-bells, do much to expand the chest and strengthen the lungs. So, too, does the practice of taking deep inspirations, of reading aloud, and of moderate singing. For those who are rapidly exhausted, and too weak to get about much, passive exercise in a carriage or boat must be enjoined. In summer, sitting or lying well supported in a boat pulled on a Highland lake—while for occupation, reading mixed with a little fishing, and the conversation of a pleasant companion, the varying tints and outlines of the landscape also serving occasionally to occupy the attention—is perhaps the most salubrious kind of exercise for the not over-weakened invalid. Even when it is impossible to get right away from home, there is no occasion to stay indoors. Anthony Trollope says, in one of his novels:—"Most of us have recognised the fact that a dram of spirits will create—that a so-called nip of brandy will create—hilarity, or at least alacrity, and that a glass of sherry will often 'pick up' and set in order the prostrate animal and mental faculties of the drinker. But we are not sufficiently alive to the fact that copious draughts of fresh air—of air fresh and unaccustomed—will have precisely the same effect. We do

know that now and again it is very essential to 'change the air:' but we consider that to do that with any chance of advantage it is necessary to go far afield; and we think also that such change of the air is only needful when sickness of the body has come upon us, or when it threatens to come. We are seldom aware that we may imbibe long potations of pleasure and healthy excitement without perhaps going out of our own country; that such potations-are within a day's journey of most of us, and that they are to be had for half-a-crown a head, all told." When nothing else can be done, sitting out in the open air should always be insisted on—in a garden, on a balcony, or even at an open window. Anything is better than remaining shut up in the same room from morning to night. Of course, in taking exercise a certain amount of discretion is necessary. We heard of a man who, on being told that riding was beneficial, hired a horse and galloped about till he was so exhausted that he did not recover for a fortnight. Exercise should be carried to a point short of producing fatigue.

The bath—tepid or warm in cold weather, cool in the summer—should be used daily, or at least twice a week, and should be followed by free friction of the skin. Flannel—both vest and drawers—should be worn, but several layers of such covering, often seen, especially among the lower orders, are useless. The neck and chest should always be covered, and the growth of the beard and moustache in men encouraged. Women should avoid low-necked dresses, and should always be prepared with a shawl or cloud to throw over the shoulders even in going from one room to another through an exposed lobby.

In ordinary cases of consumption there is not the slightest occasion for the patient to keep his room, but it is very important that the sleeping apartment should be properly ventilated. The great thing is to get as much pure air as possible consistent with warmth and the absence of draughts.

There should be no curtains round the bed, an open fire should burn in the room during the winter, and the bed should be placed in a position free from the direct draught between the fire and the door or window. The less furniture there is in the room the better.

Only a moderate temperature should be permitted, so that when in bed the patient does not feel cold. In summer, good ventilation should be secured by letting down the windows for an inch or so at the top. At the Hospital for Consumption at Brompton the wards and galleries are kept, winter and summer, at a uniform temperature of a little over 60°. The policy of this system is open to question; and in the opinion

of many competent judges the patients would do better if the temperature were considerably reduced. The floor should be thoroughly washed and scrubbed once a week with the antiseptic corrosive sublimate solution. This is made by dissolving the "soloids" of compressed corrosive sublimate in water, the correct proportion being one to the pint.

It must not be forgotten that the substance expectorated by a consumptive person is dangerously infectious. He should expectorate into a little basin containing water in which one of the corrosive sublimate soloids has been dissolved. Paper spittoons are now sold for a small sum, and are so cheap that they can be burnt after being used. In place of pocket-handkerchiefs, old soft linen rags should be employed, and these should not be washed, but burnt as soon as done with. Too much care cannot be taken to prevent the spread of consumption to other members of the family. This is especially necessary when there is a marked hereditary tendency to the disease.

The climatic treatment of consumption is a subject of the utmost importance. Each case must be decided on its own merits, and we can do little more than lay down a few general principles.

In selecting a suitable climate the chief points to be observed are that it is not liable to either extreme of temperature; that the air is pure and not too moist: that the soil is healthy; and that there is no likelihood of sudden changes, exposure to cold winds, or continued unfavourable weather. It is always well, also, to choose a place rendered attractive by bright sunshine, pretty scenery, and pleasant company. One most important object in selecting a climate is that the patient may be enabled to be out in the open air as much as possible.

The principal seaside places in this country suitable for consumptives are the Isle of Wight—especially Ventnor—Bournemouth, Torquay, Hastings, St. Leonard's, Penzance, Worthing, Sidmouth, Southport, Clevedon, and Sebay. In all of these the temperature is moderate and the moisture considerable. In the early stages of a consumption a more bracing climate, such as is found at Dovercourt or Felixstowe, on the east coast, may be desirable. Of inland health resorts Hindhead, near Haslemere, is one of the best.

Abroad, there are Mentone, Nice, San Remo, Palermo, Cannes, Malaga, Malta, and Algiers, in all of which there is a high temperature with but little moisture. In Madeira, the West Indies, and the Azores, both temperature and moisture are considerable.

In many cases nothing proves more beneficial than the three months' voyage to Australia by the Cape of Good Hope, commencing about the

end of October. The climate is all that could be wished for, the trade winds assist the vessel forward, the sea breeze is invigorating, and life on deck is all that could be desired. Many persons very ill on starting lose all their symptoms before landing at Sydney or Melbourne. Sultry heat on shore must be avoided; in summer it becomes necessary to visit the neighbouring mountains or Tasmania, in order to avoid the enervating effect of the extreme heat. The return voyage should be carefully considered, and the winter at Cape Horn especially avoided. In the winter months a trip from London to Malaga by the Hall line of steamers is excellent. The accommodation is fairly good, the patient is away from England for at least a month, and the total cost—food and everything included—is, first-class, only £15. In cases of advanced consumption the patient will require a cabin for himself, and for this special arrangements will have to be made. Care should be taken that the fact of the cabin being exclusively engaged is distinctly stated in the receipt, and also stamped on the ticket. Some inquiry should be made as to the sanitary condition of the vessel in which it is proposed to sail, and also as to the nature of the cargo. It should be also stipulated that at ports of call the ship's boat should be available for landing, as this will mean a considerable saving in expense.

Denver Colorado, and the adjacent district is probably the best of all climates for a consumptive patient.

For the slight cough which often remains for years after consumption is practically cured, the following receipt will be found useful:—

Linseed Jelly.—Half a pound of linseed (the brown seed) to three pints of cold water. Let it simmer (not boil) for two hours, then strain—or, rather, squeeze—through muslin. When cold it will be in a jelly mass. Sweeten and flavour to taste. A breakfast-cup of the jelly once a day, or oftener if necessary, with the juice of one lemon in it.

This is not only soothing, but strengthening; and the same may be said of the following:—

Egg and Milk Mixture.—Beat up the yolk of an egg, add the juice of one lemon, and then sugar to taste. Mix well before adding the milk, or curdling takes place. Add milk to the egg and lemon in quantity sufficient nearly to fill a breakfast-cup. This may be taken every day at 11 a.m.

Great care must be taken in the rearing and education of young people who come of a tubercular stock. They rarely do well in London and other large cities. They should be brought up entirely in the country; at all events, until the age of seventeen or eighteen. Anything

like a damp or marshy place is to be avoided. The house selected for their residence should be on sand or gravel—never on clay. More attention should be paid to their physical than to their intellectual development. The best part of the day should be spent in the open air. The boys should be made to ride, run, row, box, and fence; whilst riding, lawn-tennis, fencing, and gymnastics are useful for girls. The boys should be brought up to some outdoor occupation, whilst the girls should not be permitted to go as hospital nurses or visit the sick. Every possible chance of infection should be avoided, and visits to hospitals for consumptives should be strictly prohibited. It is only by strict attention to early training and physical development that the tendency to the development of the disease can be stamped out. A great responsibility rests with parents, and they should make every effort to carry out these instructions.

CORNS.—Corns, as everybody knows, occur most frequently on the feet, where they are usually due to the irritation of badly-fitting boots. The boots may be either too small, and compress the feet, or they may be too large, so that they chafe and irritate them in walking. When corns occur on the under surface of the foot, they are due to friction against the sole of the boot; but when they make their appearance on the upper surface, it is, of course, the upper leather which is at fault. High heels, by throwing the weight of the body unduly on the toes, are a fruitful source of corns; and so are patent-leather boots, which hinder the escape of the perspiration. In a smaller degree, tight socks and stockings favour the formation of corns by crowding the toes together and preventing their even spread in walking.

Corns, however, are not always confined to the feet. In tailors and seamstresses they may be found on the palm of the hand and on the knuckles, and are then due to the friction of the thimble. Occasionally, in people who play the harp or violoncello, they occur on the tips of the fingers or on the thumb. It is said that in those who do much writing they may arise from the friction of the pen. Certain occupations, such as the miner's, may excite their growth on the prominences of the knees and elbows.

There can be no doubt that in some cases a predisposition to the formation of corns is hereditary. We have heard people say that one or more of their children were born with a corn, and we see no reason for doubting the truth of the statement.

Corns may be roughly divided into hard corns and soft corns. Soft corns occur generally between the toes, their most common situation being on one side of the fourth toe. They probably arise from the friction of the toe against its neighbour, and they are kept constantly moist by the secretion of the foot, which in this situation escapes with difficulty. They differ from hard corns in being more sensitive, and in the rapidity of their growth. Their rapid formation is due to the warmth and moisture of the foot. There is a special form of warty corn which occurs only on the sole of the foot. It is usually of small size, and round in shape. It is extremely sensitive to the touch, and may become the source of the greatest possible pain and inconvenience to the sufferer, preventing his walking, and, in fact, completely crippling him.

The pain of a corn is usually most severe in damp weather. It is not uncommon to hear people say, "I know it is going to rain, my corns shoot so." As a rule, they cause most inconvenience in the spring. Sometimes corns become inflamed and matter forms beneath them, giving rise to intense pain. Occasionally the matter makes its way into a neighbouring joint, causing all kinds of trouble.

There can be no doubt that in many cases curvature of the spine has been caused by a corn. The sufferer has been for years in the habit of throwing the weight of the body in walking on one side, in order to relieve the pain of a corn on the opposite foot, and this has gradually given rise to bending of the spine.

The first thing to be done in the treatment of corns is to remove, as far as possible, the cause on which they are dependent. In the case of corns on the feet, it is very essential to have well-fitting boots, and it may even be advisable to have them made of some other material than leather—as, for example, the invention rejoicing in the classical but ungrammatical name of *pannus corium*. We need hardly say that the feet should be rested as much as possible. An illness which confines a person to bed for some time often relieves him of his corns.

Anything that mechanically protects the corn from pressure proves advantageous. Little circular pieces of felt or leather, punched with a hole in the middle, are often used for this purpose. If the corn seems inclined to bulge through the hole in the corn-plaster, it may be either pared down or covered with a piece of thin rag or diachylon plaster. In the case of soft corns, it is a good plan to surround the toe with a thin layer of cotton-wool, which should be changed at least once a day. It is often useful to powder a soft corn with oxide of zinc before using the cotton-wool.

When these preliminaries have been arranged, the corns should be vigorously attacked. In the case of a hard corn, the feet should be well soaked in hot water, and then it should be carefully pared down with a knife, avoiding, however, making it bleed. The corn is then to be painted over two or three times a day with the arsenic solution (*liquor arsenicalis*) of the *Pharmacopœia*. This usually causes the gradual disappearance of the corn. Soft corns may nearly always be cured by painting them with the arsenic solution. They either dry up and disappear of themselves, or they undergo such a change that the shrivelled remains may be cut away without pain or inconvenience. The application is unattended with danger, but the solution should be distinctly labelled, and should be kept locked up, as if taken internally, except in very small doses, it is poisonous. The green fluid sold under the name of corn solvent or corn eradicator by most chemists is a solution of salicylic acid in water, with the addition of a few drops of tincture of Indian hemp. It is a very good preparation, but the addition of the Indian hemp is perfectly useless, and is probably employed simply as a means of disguising the composition of the preparation.

Some people prefer using, instead of the arsenic solution, a lotion made by adding thirty drops of the tincture of arnica to a wine-glass of water. It should be applied on a little piece of lint, and should be renewed twice or thrice daily.

COUGH.—When a man says he has “a cough,” he generally means that he has a cold on his chest, or a slight attack of bronchitis. For directions for treatment, *see* BRONCHITIS. One is very often asked what is the best cough medicine. This is a question by no means easy to answer. There are a great many different kinds of cough, and a mixture that acts like a charm in one may prove useless in another. Still, as the proposition is put before us, we must do our best to solve it. The following is a very good general cough mixture:—

Paregoric elixir, 160 minims.

Chloric ether, 80 minims.

Oxymel of squill, four drachms.

Infusion of cascarrilla to eight ounces.

Make a Mixture. Take two table-spoonfuls every four hours.

This will be found useful, and it generally succeeds admirably, although it is not a universal panacea.

When the cough is hard and dry, and there is no expectoration, the following mixture will do good:—

Solution of hydrochlorate of morphia, 40 minims.

Dilute hydrocyanic acid, 24 minims.

Chloric ether, 80 minims.

Water to eight ounces.

Make a mixture. An eighth part every four hours.

It is to be used only for adults, and never when there is much difficulty in getting up the phlegm.

For a dry, hard, irritative cough, nothing does better than the morphia linctus (Pr. 56). It is to be taken in tea-spoonful doses, and only when the cough is troublesome. The lozenge pills (Pr. 69) are also very useful.

A cough, as we have seen, often means no more than a slight attack of bronchitis, but it may occur as a symptom of some far more serious disease. Thus cough is met with in consumption, in pleurisy, pneumonia and many other chest affections. It may depend, too, upon an elongated uvula, or it may be a stomach cough, or it may be the result of nervousness, or even of mere habit.

Usually the treatment has to be directed to the general constitutional condition, and not to any one symptom. Nevertheless, it is very useful and even necessary to know what medicines are to be used in different kinds of cough. We have selected those most likely to be of service.

Aconite (T. 1) is useful quite at the commencement of a cough, when accompanied by fever. The indications for its employment are a dry, hard, recent cough, with restlessness, flushed face, headache, thirst, dryness of the throat, scanty urine, and confined bowels. It is not likely to do good unless the temperature of the body is distinctly elevated. Directions for its employment and mode of administration were given when speaking of COLD.

Alum is often used in the form of spray for chronic coughs accompanied by hoarseness. The strength of the solution should be ten grains of the alum to an ounce of water.

Assafœtida does good in old chronic catarrhs, especially when accompanied by spasmodic cough and by occasional difficulty of breathing. A five-grain compound assafœtida pill may be taken three times a day.

Belladonna is useful in some kinds of cough, but it is difficult to say exactly what are the indications for its employment. It is thought to do most good when the cough is dry and accompanied by a sensation of tickling in the throat. A drachm of tincture of belladonna is to be

added to an eight-ounce bottle of water, and of this a tea-spoonful may be taken every two hours, with an additional dose when the cough is very troublesome; or the tabloids (T. 9) may be used.

Chamomile oil is a valuable remedy for cough occurring in hysterical women. The dose is from four to six drops on sugar. The preparation must be of good quality, and should present its original green or blue tint.

Chloroform, used as an inhalation, is useful in many kinds of spasmodic cough. One of vaporoles (V. 5) should be dropped into the palm of the hand, and the vapour quietly inhaled.

Coltsfoot is a popular remedy for coughs of all kinds. It often does good, but we do not know what are to be regarded as indications for its employment.

Drosera has been highly recommended for dry spasmodic cough resulting in vomiting. By many it is used for cases of whooping-cough uncomplicated by bronchitis or other chest affections. The tincture is the best preparation, and only small doses must be used.

Gelsemium may be given when the cough is dry and irritating. It does best in exactly the same class of cases in which the morphia linctus proves useful. The full dose of the tincture is ten minims in water every three hours. It must be given frequently, as its effect is very evanescent. Giddiness, dimness of sight, double-vision, and other similar symptoms, are to be regarded as indications for lessening the dose or decreasing the frequency of administration. Some people are much more susceptible to the action of this drug than are others.

Glycerine of tannin is a very useful application for cough resulting from a relaxed throat or elongated uvula. It should be used with a brush, the whole of the back of the throat being well swabbed out with it. This is a most valuable mode of treatment in the condition we have indicated.

Ipecacuanha enters into the composition of many of our cough mixtures. An ipecacuanha lozenge will often temporarily relieve a cough. The wine, given in drop doses in a tea-spoonful of water every hour or two hours, is a valuable remedy for a simple spasmodic cough resembling whooping-cough, and accompanied by much retching and expectoration. In the cough of chronic bronchitis, nothing affords more speedy relief than the ipecacuanha spray.

Nitric acid is useful in coughs, but only in chronic coughs. It is suitable for patients who, from a long continuance of the cough, are in a state of general bad health. There is usually great lassitude and

weakness, with loss of energy, a feeling of unfitness for exertion or work of any kind, and a state of unusual or abnormal tiredness. There is often mental depression, as the result of the physical weakness. The digestive organs also indicate a condition of depression; there is want of appetite, associated with a tongue which may be quite clean or slightly coated towards the back; a bad taste in the mouth in the morning, and after food a feeling of fulness or distension, often amounting to actual pain. There is generally a considerable loss of flesh, sleep at night is unrefreshing, and the bowels are constipated. The cough occurs chiefly during the day, and is nearly dry, what little expectoration there is being rather difficult to bring up. Sometimes the cough occurs almost entirely in the morning, on first waking or on getting out of bed. There is then a good deal of cough, with a considerable amount of expectoration of mucus. During the day there is nothing more than an occasional cough till the time of going to bed, when there is often a marked increase. In some forms of cough, occurring in middle-aged or elderly people, this remedy does much good. The symptoms are shortness of breath on exertion, and especially on going upstairs; paroxysms of cough early in the morning, with considerable expectoration. Ipecacuanha spray is of value, but when the patient is generally out of health nitric acid may be used internally. It not only improves the general health, but also the condition of the chest symptoms. A nitric acid mixture may be made by putting a drachm of the dilute nitric acid of the British Pharmacopœia into an eight-ounce bottle of water. The dose in all these cases is two or three tea-spoonfuls three times a day.

Sulphur, in the form of the tabloids, is used for obstinate dry cough, with tightness in the chest and retching; and also for loose cough, with expectoration of whitish-coloured phlegm.

Tartar emetic in small doses is very useful in many different kinds of cough. It is especially indicated when the expectoration is profuse, easily expelled, and mucous in character. The accompaniment of nausea or vomiting is to be regarded as an additional indication. A mixture may be made by adding a tea-spoonful of antimony-wine to an eight-ounce bottle of water. The dose of this is two tea-spoonfuls every two or three hours.

Often enough a mustard poultice or the application of tincture of iodine to the chest will do more to relieve a cough than any medicine. As a rule, it will be found a good plan to abstain from beer as long as there is any cough. Mucilaginous drinks, such as gum-water, barley-water, and linseed-tea, are very soothing, and often serve effectually to

allay the troublesome tickling or irritability in the throat. When there is not much expectoration, an effort of the will often does much to restrain the violence of the cough. When there is anything to come up, the sooner it is up the better; but in other cases it is a bad plan to give way to the cough.

DANDRIF.—(*See SKIN DISEASES.*)

DEBILITY.—The term debility is used—somewhat loosely, it must be admitted—to indicate a condition in which there is no actual disease, but in which all the functions of the body are performed, if not imperfectly, at all events with less than their accustomed vigour. The patient has no actual complaint; his heart, and lungs, and kidneys, and so on, are, as far as he knows, healthy, but still he feels that he is “below par” and that he is not “up to the mark.” This condition is a very common one, and is met with in all ranks and classes of society, from the hard-worked, half-starved general servant to the rich city banker with thousands and tens of thousands at his command. There is a general want of energy, a disinclination for work, and a disrelish for everything. The patient cannot point to any particular region and say, “This is the seat of my disease,” but he feels “queer all over.” He knows he is ill, and yet cannot say exactly what ails him. Everything seems a trouble, a bother, and a nuisance; not only is work performed with difficulty, but there is even a disrelish for amusement. Invitations are declined, and a dinner or party is regarded with absolute aversion. When one is “seedy” one almost hates the sight of one’s fellow-men. The once companionable and jovial fellow becomes morose, and cares little for the society of even his most intimate friends. He goes home as soon as he can, and lies on the sofa—heavy, dull, and fretful, discontented with himself and all the world besides. Nothing interests him, nothing amuses him; he is a misery to himself and to everybody else.

This condition is very common, and may be induced by a variety of causes. It is frequently seen in schoolgirls; and we don’t wonder at it, considering that nowadays they are compelled to cram their heads with French, German, Italian, rhetoric, composition, the elements of astronomy, geology, geometry, chronology, and a host of things their grandmothers never even heard of. Boys do not suffer in the same way, although

they work equally hard, because they get plenty of good, healthy, outdoor exercise. Debility often arises, not from over-work, but from dissipation. The young man of fortune who enters upon his worldly career full of health and strength, and runs a course of riotous living, spending his substance and himself like the "prodigal son," soon finds himself in a state of profound debility, which, unless he will consent to turn over a new leaf and live more in accordance with the laws of health and the dictates of common-sense, soon ends in serious organic disease. Young married people often suffer from debility, and have to learn that for the maintenance of health it is necessary to be moderate in affection as in everything else. Some people get debilitated as the result of over-work; others as the result of under-work. To preserve the balance of health it is necessary for everyone to do something: there must be an outgo as well as an income. Many people fail to recognise the fact; they are sufficiently well-off pecuniarily to be independent of any business or profession, and they do not care to exert themselves. They fail to see the necessity for work, there is nothing to rouse them up or urge them on, and the result is that they do nothing. There are thousands of people in this world who are too lazy even to amuse themselves. They suffer from *ennui* and debility, and no medicine will ever cure them. The remedy is in their own hands. Really the best thing that could happen to them would be a temporary reverse of fortune. When they see a pressing necessity for exertion they respond to it, with manifest advantage to themselves. Many a man has been cured of his indolent habits and consequent debility by having to nurse a near and beloved relative through a long and dangerous illness.

It is difficult to lay down general rules for the treatment of debility, for it springs from so many different causes. It is obvious that a man who has been overworking himself wants rest, both mental and physical, whilst such a mode of treatment would prove anything but beneficial to him whose only complaint is want of occupation. There are, however, a few general principles which are applicable to all cases. In the first place, lowering treatment is inadmissible. It is a good plan to have the bowels regularly open, but anything like active and repeated purgation is to be sedulously avoided. In the case of a delicate young woman whose health has been lowered perhaps by too frequent pregnancies or by over-suckling, an extra hour or two in bed in the morning will do more good than a blue-pill. Do not forget that a fresh horse has more "go" in him than a tired one, and that, as an old writer says, "roses may be cultivated in beds."

A bath should be taken every morning. If you are weak and pulled down, do not attempt a cold bath at first, but be content with a tepid one. Many people enjoy a cold bath in the summer, but find it too much for them during the colder months of the year. If you get the opportunity of having a swim or some sea-bathing, do not neglect it, for nothing can be more invigorating. The addition of sea-salt to the morning tub is undoubtedly beneficial.

Outdoor exercise should be taken every day when it is not absolutely raining. Even should you get wet it seldom does much harm, provided you walk briskly home and change your wet things at once. The duration of the exercise must be in proportion to the strength and previous habits. At first, a walk only of a few hundred yards may seem all too much, but in a few weeks six or eight miles may be done at a stretch, not only with impunity, but with positive benefit.

In all cases of debility a generous diet is absolutely necessary, for it is very difficult to regain strength if you are not living well. A fair allowance of stimulant is advisable, and it is best taken in the form of a good, full-bodied port or nourishing stout. A glass or two of champagne at dinner, when there is much depression, is as good a medicine as we know. When there is much weakness, a glass of rum and milk may be taken in the morning before dressing.

An hour or two's rest on the bed in the middle of the day, with an amusing book, is an excellent restorative.

When there is anæmia, it should be treated according to the rules we have already laid down, tabloids 15, 34, and 65 being employed.

Want of appetite and loathing of food is an indication for the administration of quinine (T. 63); or the gentian and acid (Pr. 15), or gentian and soda (Pr. 14) mixture may be given.

Cod-liver oil is a most excellent remedy. Begin with a tea-spoonful three times a day, and gradually increase the quantity to a table-spoonful, beyond which it is seldom necessary to go.

Another good combination is the Kepler extract with hypophosphites. This may be alternated with Kepler extract with iodide of iron. They are both of them excellent in general debility.

Fellow's syrup of the hypophosphites is an excellent restorative, and after a course of a few weeks of this remedy, the tonic tabloids (T. 79) may be substituted.

The practice of anointing the body with oil is a very old one, and might be advantageously revived in cases of extreme debility. Memory recalls the abundant use of unguents in ancient Judea. The Bible tells

us of kings being anointed with sacred oil, of precious ointment running down Aaron's beard to the skirts of his clothing, and of Jesus having His feet covered with costly salve immediately after being washed. Cod-liver oil is unsuited for the purpose of inunctions; those who submit to it become repugnant to the nostrils of their friends, and the odour from the skin prevents the delicate stomach from assimilating or even retaining food. With the smell of fish-oil in the nose, everything seems to taste of it, so that rubbing with this substance usually proves a failure and has to be abandoned. Scented lard, pure salad or olive oil, or almond oil, may often be used with the greatest advantage. We have known many instances of the lives of children having been saved by rubbing in pure olive oil over the stomach. The inunction should be performed after a warm bath or before the fire. The hand alone should be used for the purpose, and care must be taken not to produce rawness or abrasion of the skin. The process need not be confined to the trunk, and the limbs should come in for their fair share. The frequency of repetition must to some extent be guided by the result, but twice a day to begin with is often enough. We may mention incidentally that this mode of treatment often proves most valuable in rheumatism and for stiff or contracted joints. For debility resulting from excessive brain work, the elixoid of phosphorus is by far the best remedy.

An important element in the treatment of debility is change—change of air, change of scene, and above all, change of work. To the majority of us life is most frightfully monotonous. A perpetual round of duties has a depressing effect both on the body and mind. It wearies us day by day to see the same faces, view the same things, hear the same voices, smell the same odours, listen to and talk the same platitudes. After long experience at home, we know exactly how the tea will taste, how the sirloin of beef is likely to be served up, what probability there is of the mutton being tough or the steak underdone. We know, too, exactly what the wife will say when we come home, and the exact tone in which she will say it. When people live together day after day, month after month, and year after year, they find it very difficult to find subjects for profitable conversation. This monotony can best be combated by change of air; for with this comes variation of scene; with that arrives change of thought; and with that, again, start up new trains of ideas and expansion of mind. To go for change of air is, or ought to be, an expedition in quest of information and a search for something new. From it one returns with

a fresh fund of anecdotes, a new collection of stories, a fuller *répertoire* of experiences, and an additional store of illustrations, which for months to come serve to brighten the dull realities of life. It is obvious that if the main object of change of air is to get over the results of monotony, Paterfamilias should not always travel with his wife and family.

In the majority of cases of debility it is safer to consult a doctor. When you consult him try and induce him to examine your urine, to make sure there is nothing wrong there. Bright's disease often comes on very insidiously, and in cases of great debility occurring in middle-aged people this must always be borne in mind.

Sometimes the term debility, or nervous debility, is used as synonymous with spermatorrhœa. This complaint—it is not a disease—is the happy hunting-ground of quacks of the worst class. They distribute their wretched pamphlets in the street and tell you that the symptoms of this condition are “Nervous Prostration,” “Loss of Appetite,” “Incapacity for Study,” “Pimples on the Face,” “Premature Decay,” “Indecision,” “Specks before the Eyes,” “Dislike to Enter Society,” and “Epilepsy.” There is, of course, not a single word of truth in all this rubbish. In a pamphlet before us the wretched quack enumerates in big letters and with a plentiful display of capitals no less than thirty-four symptoms, the whole of which exist solely in his own imagination. It would be laughable were it not that these indecent productions often do a great deal of harm by frightening young men who ought to know better, and should not hesitate to discuss such matters with their doctor or some other person of sense and responsibility.

Wet dreams rarely do much harm, but if they occur too frequently, they can very easily be checked by the following simple measures:—

(1) Sleep on a mattress, and not on a feather bed. Use but little covering in the way of bed-clothes at night: a sheet and one blanket must suffice, except in the coldest weather. Never remain more than seven hours in bed.

(2) Take a cold bath every morning, whether you like it or not. Live as plainly as possible. Avoid heavy suppers, and eat nothing for two hours before going to bed. Do not drink more than two glasses of beer a day. Do not take “grog” or spirits in any form. Do not smoke more than two pipes a day.

(3) Join the Volunteers or a cricket-club, or go in for rowing, or football, or gymnastics. Use dumb-bells and Indian clubs. Do not stay

indoors more than you can help. Go into society as much as you can, and never refuse an invitation.

(4) If you have any books or pamphlets on the subject of your complaint, put them on the fire at once—*this is essential*. Purity of thought is an important element in treatment.

(5) Take three of the bromide of potassium tabloids (T. 18) in water at bedtime.

Follow these directions for a month, and you will be cured.

DELIRIUM TREMENS.—Delirium Tremens, or “D.T.,” as it is frequently called, is still, unfortunately, a common disease in this country. It may be described as an acute attack of poisoning by alcoholic drinks. Men are much more prone to this disorder than women, although, as we know, the gin-palace is not without its votareesses. At one time it was supposed that delirium tremens might be induced by abstinence from stimulants in those long accustomed to their use, but this is now an exploded idea, and it is an established fact that a man may at any time discontinue his habits of drinking without any risk of injuring his health. Individuals of an irritable, nervous system, who are subjected to any prolonged mental strain, may induce the disease by smaller quantities of alcohol than would be required to excite it under ordinary circumstances. It is said that, even in temperate persons, long-continued mental anxiety—that state of mind, for example, in which gamblers and great speculators habitually live—may cause it; and, in fact, it may arise from anything by which the mind is over-wrought.

The first symptom of delirium tremens is very commonly inability to sleep. The sufferer may have long indulged to excess in drink, or he may be quite a novice in intemperance, but in any case a greater debauch than usual has preceded the outset of the attack. The patient finds himself quite unable to obtain any sleep, or at most can gain only short snatches of slumber, disturbed by horrible dreams and visions. Even during his waking moments and in broad daylight he suffers from hallucinations of sight, which usually take the form of disgusting or terrifying objects, such as snakes, insects, or monsters. Sometimes he fancies he sees armed men pursuing him with threatening gestures. More rarely he hears voices denouncing threats or mocking him, and occasionally he thinks he smells disgusting odours. He manifests great impatience of any interference or assistance in his ordinary duties, which he discharges in a bustling and tremulous

manner. Usually there are at first no real delusions; and even when there are hallucinations the patient frequently recognises them as such, and is able by an effort of the will to banish them. There is commonly a complete loss of appetite, and little or no food is taken.

After a time, distinct delusions become apparent; the patient talks incessantly in a rambling fashion, and points to imaginary terrific shapes about him, which he is constantly seeking to push aside with a restless motion of his hands. The delirium is not a fierce or mischievous delirium, but a busy delirium: he does whatever he is told, but does it in a hurried way, with a sort of unsuccessful anxiety to perform it properly. He is not altogether inattentive to the objects and proceedings that are going on around him, but his mind soon wanders away to other subjects. Sometimes he is very suspicious that those about him intend to do him some injury, or he thinks that he is surrounded by enemies. He is haunted by spectra, fancies that rats, mice, and other vermin are running over his bed, or perhaps sees spiders crawling on the ceiling, or a horse's head thrust through the wall of the room. He addresses remarks to imaginary strangers, and looks suspiciously behind the curtains, under the impression that the devil is there waiting for him, or that there is somebody watching him. It is seldom that he meditates harm either to himself or others, and there is usually a mixture of cowardice or dread with the delirium. If you question him about his disease, he answers quite to the purpose, describes in an agitated manner his feelings, puts out his tongue, and does whatever you bid him; but a moment later he is wandering from the scene around him to one that exists only in his imagination. He gives orders to absent servants, refers to some imaginary appointment he must keep, or speaks of strange adventures he has met with during the night. The publican thinks that he is drawing beer for hosts of customers, and the lawyer that he is making an effective speech to the jury. The patient may be recalled by addressing him in a firm and determined manner, and may even be temporarily reasoned out of his delusions.

The tremor which, from its striking prominence in many cases, has given the disease its name, is by no means universally present. It is usually observed in the case of confirmed dram-drinkers, but often enough it is only an exaggeration of a tremulousness of the hands, which has existed for months or even years. Even when the tremor is not present there is a constant restlessness; the patient shifts from side to side in bed, and will get out twenty times in an hour, if allowed to do so. The tremulous tongue is moist and creamy, the pulse is

frequent, the eyes are in almost constant movement, and the pupils are usually, though by no means always, dilated.

Very often the face is flushed, but sometimes it remains deadly pale. Usually there is much sweating, which is obviously due in great part to the constant muscular movements. Attacks of sickness are not uncommon, the bowels are confined, and pain may be complained of about the pit of the stomach.

In favourable cases, a critical sleep comes on about the beginning of the third or fourth day, and the patient slumbers heavily for twelve hours or more. From this he awakes fearfully weak, but free from delirium. Such is the rule ; but, unfortunately, after many hours' profound sleep the patient sometimes awakes as delirious as ever, or in a state of complete prostration, which may terminate in death. The occurrence of sleep marks the commencement of convalescence only when, on awaking, the intellect is clear, the delusions and hallucinations have disappeared, and the pulse is reduced in frequency. The stage of convalescence once established, everything progresses favourably. But, unfortunately, in many cases there is no sleep at all ; the wakefulness continues, and the case becomes critical.

Let us now discuss the treatment of delirium tremens. The patient should be at once put to bed in a quiet, darkened room—the less furniture the better—and everything should be avoided that could in any way excite his imagination. Friends and relatives often annoy him by their presence, and it is as well that they should be replaced by a good automatic attendant who will not talk. In cases in which the patient is both violent and of considerable strength, two trained nurses, with experience in the treatment of lunatics, should be in constant attendance. It is always most desirable to avoid the use of the straight-jacket, or even of bandages, for the purpose of restraint ; and this may usually be done by a little tact and management.

It is of vital importance that the patient should be well supported by the frequent administration of food. He will not take mutton-chops, or anything of that kind, and it is useless trying to induce him to do so ; but you may get him to swallow the whites of a dozen eggs with a little lemon-juice in it, or he may take whey of milk with lemon-juice, and, perhaps, just a dash of wine or brandy to flavour it. It is desirable that plenty of milk should be taken, or soup, or strong, hot broth with bread in it. The addition of plenty of cayenne pepper (T. 22) to the soup or broth often proves beneficial to still the nervous excitement. The necessity for the administration of some nutriment is

imperative; and if the stomach be at first too irritable, or the loss of appetite too complete, to allow of food being taken in the usual way, it must be given in the form of an injection. Even more depends on dietetic than on medicinal treatment. In young people no hesitation need be felt in completely cutting off stimulants, but in those who are old and feeble a small quantity of wine or brandy must be allowed.

It is a good thing to get the bowels open; two or three watery motions do good, but excessive purgation must of course be avoided. A cathartic tabloid (T. 25) followed in the morning by three or four table-spoonfuls of the white mixture (Pr. 25) will answer better than anything.

With many doctors it is the custom to give very large doses of opium in delirium tremens, with the view of producing sleep; but the practice is not free from danger; it is far better to give four or five of the bromide of sodium tabloids (T. 19) dissolved in water and repeated four times a day if there is much restlessness at night.

Chloral is a most valuable agent in the treatment of delirium tremens. In ordinary cases it will suffice to give two or three of the tabloids (T. 28) dissolved in water—flavoured if thought desirable—at bedtime, but when the symptoms are urgent it may be necessary to give a tabloid every hour for three or four consecutive hours. It usually produces a calm and refreshing sleep.

Three table-spoonfuls of the bromide of potassium mixture (Pr. 31), given every two hours, will succeed, in a large number of cases, in calming the nervous agitation and producing a good sound sleep. As soon as the patient awakes the administration may be resumed to the extent of three or four doses more. These are large doses of bromide of potassium, but it is much safer to give them than to administer knock-down doses of opium. Bromide of potassium is especially serviceable in dispelling delusions remaining after the partial subdual of an attack. Bromide of strontium or bromide of sodium (T. 19) may with advantage be substituted for the potassium salt.

Belladonna (T. 9), in two-drop doses of the tincture every two hours, has been recommended. Sleep and a quiet night, with marked improvement the next day, are said to be the results.

Stramonium answers well in cases characterised by violent, noisy delirium and complete loss of sleep. A tea-spoonful of the tincture should be put in an eight-ounce bottle of water, and of this a tea-spoonful should be given every hour or every two hours.

It is important that the skin should act well, and benefit is often

derived from the use of the wet pack. It has frequently a most soothing influence. In every case of delirium tremens a doctor should be called in without a moment's delay.

DERBYSHIRE NECK, GOÎTRE, OR BRONCHOCELE.—By the terms Derbyshire neck, goître, or bronchocele, we mean hypertrophy, or enlargement of the large gland called the thyroid, which naturally exists in front of the windpipe.

The circumstances which favour the production of this complaint have been frequently investigated, but the question is still to a great extent involved in obscurity. Goître is essentially an endemic disease—that is, it prevails in certain localities, but scarcely occurs elsewhere. It has been frequently noticed that people who have gone to live in these districts have become affected with the complaint; whilst, on the other hand, persons who have migrated from the locality have been sometimes cured by the mere change in residence. Goître abounds in the hollows and valleys of many mountainous districts, among the Alps, for example, and in the Pyrenees, and on this account it was supposed to be due to some peculiarity in the atmosphere. It was at one time said that the disease was always found and occurred only in deep, close, moist valleys, shut in by high mountains. On further investigation, this statement was found to be too general, and in fact there is now abundant evidence to show that the complaint occurs quite independently of atmospheric conditions.

It has been proved pretty conclusively that goître has its origin in some impurity in the water, but of what that impurity consists is not precisely known. At one time—probably from its frequent occurrence in Alpine regions—the disease was ascribed to the use of snow-water. A very little consideration will serve to show that this explanation is insufficient, for the people in almost all the valleys of Switzerland drink the water which comes from the glaciers, but in only a few of them is goître prevalent. Then again, as we know, it occurs frequently in Derbyshire, where the snow never lasts long, and even in Sumatra, where snow is never seen. There are reasons for supposing that it is the presence of limestone in the water which produces these injurious effects. In some parts of England—Yorkshire, Derbyshire, Nottinghamshire, Hants, and Sussex—where the disease prevails, there is a ridge of magnesian limestone running from north to south throughout the entire district. On the other hand, there are many goîtreous

regions in which the water is not unusually hard. Of late years an attempt has been made—and we think unsuccessfully—to show that the constituent of water which is the actual cause of goître is some salt of iron, or more rarely of copper. The prevalence of the disease in limestone regions is explained on this theory by supposing that the water has travelled the metalliferous strata of the rocks.

Goître may be very rapidly produced. There are certain waters in Switzerland which would cause it even in eight or ten days, and cases have occurred in almost as short a time in other places. It is said that both in France and Italy the drinking of certain waters has been resorted to, and apparently with success, for the purpose of producing goître, and thereby gaining exemption from military conscription.

Goître occurs much more commonly in women than in men, the proportion being about twelve to one. At the same time, it must be remembered that our fashion of dress renders a small bronchocele much more noticeable and less easily concealed in females. It is probable that bad food and low living, by depressing the general health, conduce to the production of goître. It is met with in all classes of society, but occurs most commonly amongst the very poor, who live in cellars and kitchens, or in damp, ill-ventilated streets and courts. As a rule, the complaint does not show itself in children younger than eight or ten; but it is occasionally seen in young people shut up in school-rooms or leading a sedentary life—as unnatural as it is prejudicial. It is said that the disease is hereditary; but it must be remembered that in the majority of cases the children are living under identically the same conditions as their parents. Every race of man is liable to bronchocele, and it occurs in all latitudes, from the Arctic regions to the tropics. Franklin found it amongst the inhabitants of the Polar regions, and Mungo Park amongst those of the interior of Africa.

A goître may attain a very considerable size, but in many cases it causes merely a slight fulness of the throat, which by many people is thought to be not ungraceful. It may continue for years without reaching any extreme or very troublesome magnitude. In some cases it has remained stationary for a very considerable time, and has then suddenly, and without any apparent cause, increased rapidly in size. The swelling is usually larger during the menstrual periods, or when from any cause the health is temporarily deranged. Bronchocele is not in itself a painful disorder, nor does it taint the system or affect the constitution in any way. It is, as a rule, a perfectly innocent tumour, and presents no signs of malignancy. Any distress or inconvenience

which it may occasion will be from its size, and the pressure it exerts on the windpipe, gullet, and neighbouring structures. Sometimes it obstructs the return of blood from the head, and gives rise to headache, giddiness, noises in the ears, confusion of thought, and other disagreeable symptoms. When it presses on the windpipe it may cause hoarseness, wheezing, and shortness of breath.

There is one form of *goître* which differs so strikingly from that which we have already spoken that it requires a separate description. It is known as *exophthalmic goître*, or sometimes as *Graves' disease*, after the doctor who first described it. It is characterised by the concurrence of three notable symptoms—palpitation, enlargement of the thyroid body, and prominence of the eyeballs. The last-mentioned symptom is so peculiar and striking as to at once arrest the attention. The eyes are pushed forwards, so that they look almost as if they were going to drop out of the head. In extreme cases they are bulged to such an extent that the lids cannot be closed even during sleep. This projection of the eyeballs gives the patient a remarkably wild and strange appearance. The pulsation is at all times persistent, but is increased by bodily exercise or mental exertion. It is not confined to the region of the heart, but is experienced more or less all over the body. The swelling on the front of the neck never attains any great size. These are the three symptoms which together may be said to constitute the complaint, but there are others which are more or less commonly observed. Thus, there is often a change in temper, which becomes capricious, irritable and peevish. A disposition to flush under slight emotion, a tendency to bleeding from the nose, and a sense of heat, accompanied by profuse perspirations, are often experienced. The complaint usually occurs in young women, and most commonly in those who are suffering from some derangement of the uterine functions. Its production appears to be quite independent of any influence of soil or climate. Very many of the patients are found to be markedly anæmic.

Let us now consider the treatment of *bronchocele*. One very important point, which should be preliminary to all other modes of treatment, is the removal of the patient from the dangerous locality. When the patient has been removed to some more salubrious place of abode, we may administer our drugs and apply our lotions and ointments with greater hope of success. When this preparatory step is absolutely impossible, every drop of water should be boiled, or, what is still better, distilled. The best remedy for *bronchocele* is, in all probability, iodine

—iodine inside and out. It is best given internally in the form of iodide of potassium. Two, four, or even six table-spoonfuls of the mixture (Pr. 32), or as many tabloids (T. 18) should be taken three or four times a day. In addition, the swelling may be painted as often as it can be comfortably borne with the tincture of iodine, or the iodine ointment may be rubbed in freely. By this method of treatment the enlargement often very rapidly diminishes, and a considerable improvement is noticeable in the patient's general condition. In cases in which anæmia is present, it is very desirable to get rid of this complication, and iron should be administered without delay. Prs. 1, 2, and 63, or T. 15 and 65 will be found useful for a preparatory course of iron; but in some cases it may be advantageous to take the iron and iodine in combination, and then the syrup of iodide of iron (Pr. 4), or Kepler extract with iodide of iron, should be preferred.

In India, an ointment of red iodide of mercury is largely used in the treatment of goître. It is made as follows:—Melt three pounds of lard or mutton suet, strain and clean; when nearly cool, add nine drachms of finely powdered red iodide of mercury (obtainable from any chemist), and rub up in a mortar until no red grains are visible, and keep it in pots protected from the light. The ointment is applied to the swelling at sun-rise, and is well rubbed in for at least ten minutes. The patient then sits in the sun as long as he can endure it. In some six or eight hours there will probably be more or less pain from the blistering action of the application. About two in the afternoon the ointment is again well rubbed in with the hand. Some ointment is then left in contact with the swelling, and this becomes absorbed by about the third day. In ordinary cases one such course is usually found to effect a cure; but in bad cases it may be necessary to repeat the treatment after an interval of from six to twelve months. In England, the kitchen fire will probably have to be substituted for the rays of the sun. Very good results have been obtained by rubbing in the ointment night and morning, and afterwards covering it with oil-silk.

For many years spongia, or roasted sponge, has been used in the treatment of goître. It contains both iodine and bromine, and it is probably to the presence of one or both of these bodies that its curative properties are due. It has, however, sometimes proved successful where iodine has failed. To be of service it must be given in small doses and frequently.

For exophthalmic goître, tincture of belladonna is the best remedy.

Its effects are often very striking. In one case, five tea-spoonfuls of the belladonna mixture (Pr. 39), taken hourly, afforded great relief in four or five days, although the disease had lasted more than a year, and in two months a cure was all but effected. Of course, in this, as in the other form, iron should be given when anemia is a marked symptom.

Such, then, is the medical treatment of bronchocele. Should these remedies fail, it may, under certain circumstances, be necessary to resort to surgical interference. It may, however, be laid down as a rule that so long as the disease is merely a deformity—so long as it does not interfere with any of the important functions of the body, nor produce serious discomfort—does not distress the breathing by pressing upon the windpipe, nor interfere with swallowing by pressing upon the gullet, nor impede to any great extent the flow of blood to or from the head by pressing upon the great blood-vessels of the neck, nor grievously encumber the patient by its weight, a surgical operation is neither advisable nor justifiable.

We must now say a word or two on what is known as cretinism. By cretinism we mean a strange, melancholy disease, which has a curious and as yet but little understood connection with goître. It is a kind of idiocy, accompanied by some deformity or affection of the bodily organs. The mental affection varies in degree from mere obtuseness of thought and purpose to complete obliteration of intelligence. Many cretins are incapable of articulate speech; some are blind, some deaf, and others labour under all these privations. They are usually dwarfish in stature, with large heads, wide vacant features, goggle eyes, short crooked limbs, flabby muscles, and retracted bellies. This disease occurs most commonly in goîtreous districts. It is met with in the Pyrenees, in the Alps, in the mountains of Syria, in the hilly parts of China, and in the Himalaya regions. With few exceptions, cretins have bronchocele: but of course bronchocele is not always accompanied by cretinism. What is the exciting cause of cretinism we do not know, but by many it and goître are supposed to have a common origin. It has been shown experimentally that the permanent removal of the unfortunate cretin from the infected district, combined with judicious medical and moral discipline, will often ensure a perfect restoration to health and reason.

DIABETES.—This is a constitutional disease, characterised by the passing of large quantities of water. There are two kinds of diabetes—one in which the urine contains sugar, and another in which there is

no sugar. The former is known as diabetes mellitus, and the latter as diabetes insipidus. They agree in the fact that in both there is an excessive secretion of urine, but they differ in so many important respects that they must be regarded as two totally different diseases, and we shall accordingly discuss them separately.

Diabetes Mellitus.—This is the commoner form, and the one which is usually meant when the term diabetes alone is used. If you are suffering from diabetes, and yet have no sugar in your urine, this is not your complaint. You must pass on to diabetes insipidus.

In the first place, we will describe the urine passed in diabetes mellitus, so that if you have any suspicion that you are suffering from this disease, you may compare the water you are passing with our description.

To begin with, there is a marked increase in the quantity secreted. If you were to collect all the urine passed by a healthy person in twenty-four hours, and were to measure it, you would find that it amounted to something between one and four pints. Of course, the quantity is subject to a little fluctuation, according to the quantity of drink taken and the amount of water given off by the skin and bowels; but on an average it is about fifty ounces, or two pints and a half. Now, in cases of diabetes the quantity is very much greater. It is usually somewhere between eight and fifteen pints, and in some cases it has been known to exceed thirty-two pints. This is an increase you could not possibly overlook; or, at all events all you want to make quite sure is a common half-pint measure.

Then, again, urine containing sugar differs strikingly in many particulars from healthy urine. It is commonly of a light colour, and being so copious, is usually free from any deposit. Its odour is somewhat peculiar, and is said by some to resemble sweet hay, and by others to be like the faint smell of an apple chamber. Moreover, its taste is more or less decidedly sweet. If you just dip your finger into ordinary healthy urine, and put it to the tip of your tongue, you find that it is tasteless, or very nearly so; but if you do this to urine containing sugar, you, naturally enough, perceive that it is sweet. Sugar in the urine occasionally testifies its presence in other ways. Sometimes it undergoes a kind of rude crystallisation as the urine dries. A girl who suffered from this complaint observed that if her water were accidentally spilt upon her black stuff shoes every drop left a white powdery spot behind it. In another instance the patient was first alarmed by finding that her black worsted stockings were sticky and covered with a white dust,

from the same cause. In still another case the patient's attention was first drawn to his urine by the number of flies and wasps which its sweetness attracted to the chamber-pot. It is said that in India the red ants have been observed to swarm in the same way about a vessel containing diabetic urine.

The presence of sugar in the urine naturally increases its density. The urine of a person suffering from diabetes mellitus is heavier than the urine of a healthy person. If we take the specific gravity of healthy urine by means of a urinometer (*see URINE*) we find that it lies somewhere between 1,015 and 1,025, the specific gravity of water being 1,000. Now, if we take the specific gravity of the urine of a person suffering from diabetes mellitus, we find that it is very high. It ranges from 1,030 to 1,060, but is generally a little above or below 1,040. Do not try the specific gravity of your urine directly it is passed, but let it get cold first. The best way is to mix all the urine passed in twenty four hours, and to examine a specimen of this. By this plan you get a good average result, for naturally the specific gravity of the urine varies a little at different periods of the day.

There is a very simple and beautiful test, by means of which the presence of sugar in the urine may be detected. A few crumbs of German yeast are put into the bottom of a small, narrow-necked bottle; this is filled up to the brim with the suspected urine, covered with a saucer, and then inverted. If a little urine be put in the saucer and the bottle be kept upright, the fluid will not run out. The saucer and inverted bottle should then be placed on one side in a warm place—say on the mantel-piece. If sugar be present fermentation takes place, giving rise to carbonic gas, which forces out of the bottle the whole or a portion of the urine. There is one precaution which should be observed. Some specimens of yeast spontaneously evolve bubbles of gas, so that it is desirable to perform a similar experiment with simple water in the place of the urine, and to compare the results. A penny-worth of German yeast may be purchased at any baker's.

The presence of sugar in the urine on one occasion is not an infallible sign of diabetes, for it may exist as a temporary condition, as the result of some error in diet. As a rule, however, it is a matter of serious import. In many cases the quantity of sugar contained in the urine is very great, and in some instances people have been known in a few months to pass their own weight of sugar.

So much, then, for the urine. We need hardly say that this is not the only symptom. As so much fluid is poured out by one channel

the others naturally suffer. The skin is usually very dry. We have heard a patient say, "Nothing ever makes me perspire. It does not matter how hot it is, or how fast I walk, my skin is always quite dry, even under the armpits." The dryness of the skin is usually in proportion to the amount of urine secreted. The bowels are confined and the motions dry and hard. Excessive thirst is usually a common symptom, and often leads to the detection of the nature of the case. It is not uncommon for a diabetic patient to drink from eight to twelve pints a day, without satisfying his thirst. The mouth is usually dry; and the tongue dry, parched, and sticky. There is, as a rule, no falling-off in the appetite, and it is not uncommon for the patient to eat very much more than when in health. We often hear people say that as long as they can eat well there cannot be much the matter with them; but this is not always true. In spite of the quantity of food taken, the patient gradually loses strength and gets thinner and thinner. This is the rule, but it is not without exceptions. We had recently under our care a man suffering from diabetes who weighed over twenty-three stone. He had not the slightest idea that there was anything serious the matter with him, and all he complained of was that he was so fat that he could not get about comfortably. The breath of diabetic patients has usually a peculiarly sweet and very characteristic odour. They often suffer from boils and carbuncles, frequently in an aggravated form. Cataract is not an uncommon accompaniment, so that the sight becomes affected.

Diabetes is generally a chronic disorder, creeping on at first insidiously, and under judicious treatment prolonged over a long course of years. Sometimes, however, it runs a very rapid course. In many cases the lungs become affected, and the patient ultimately dies from a form of consumption.

Having enumerated the symptoms of diabetes mellitus, we will now proceed to consider the circumstances which favour its production. In the first place, it is twice as common in men as it is in women. It prevails chiefly among young and middle-aged adults. It is relatively more common in urban and manufacturing districts than right out in the country. It is not usually considered to be an hereditary disease, but still, in some cases it would appear to run in families. It is difficult to say from what it arises. In a considerable number of cases it has followed soon after exposure to wet and cold. In some instances it is said to have been caused by drinking cold water whilst the body was hot; and in others it is supposed to have been the result of alcoholic excesses.

A violent mental emotion has sufficed to produce it. In one case it followed distress of mind caused by unjust suspicion of theft; in another it came on after the burning down of the patient's place of business; whilst in a third it was attributed to anxiety attendant on a Chancery suit. In one instance it followed a violent fit of anger—a warning to bad-tempered people. There can be no doubt that in many cases it has followed blows or falls on the head.

In all cases of diabetes or suspected diabetes a medical man should be consulted. It will not, in the majority of cases, be requisite to remain permanently under his care. You will learn from him the exact nature of the complaint from which you are suffering, and he will give you directions as to your mode of living and the general method of treatment to be adopted. You will have to see him occasionally, say once a week, and he will require you to carry out his directions most implicitly.

The first and foremost point to which attention must be paid in the treatment of diabetes is the diet. The plan to be pursued is to withdraw, as completely as possible, but not too suddenly, all articles containing sugar or starch (which is easily converted in the system into sugar), and to replace them by appropriate substitutes from the vegetable kingdom and by animal food. It is well known that life and strength may be sustained on a purely animal diet. The best proof of this is that the inhabitants of the Arctic region subsist exclusively on the flesh and blubber of seals, on fish, and such produce of the chase as the climate affords. Moreover, the fur-hunters of British America, an extremely vigorous and muscular body of men, subsist for many consecutive months on flesh alone. As the diabetic may take his choice of almost any article of animal food, he is clearly in no danger of dying of starvation. The only articles derived from the animal kingdom which are absolutely forbidden are honey and liver, both of which contain sugar. Milk is usually prohibited because it contains sugar, but it is found that if taken in moderation it does but little harm. From the extensive diffusion of sugar and starchy matter through the vegetable kingdom, nearly all the vegetable alimentary substances in common use will have to be eschewed. Of course, starch is contained largely in bread and other kinds of corn food, whether derived from barley, oats, rye, maize, or rice, and these are consequently prohibited. Potatoes must be abandoned for the same reason, as must be peas and beans. Carrots, parsnips, beetroot, turnips, and radishes contain sugar, and are ineligible as articles of diet. Sago, tapioca, arrowroot, and other forms

of farinaceous food, must be avoided. Macaroni, vermicelli, and Italian paste are prepared from wheat, and abound in starch. As regards vegetables other than those which have been already mentioned, it may be laid down as a general rule that anything white contains sugar, so that cauliflower, brocoli, cabbage, seakale, celery, and asparagus are objectionable. Any vegetable which, by exposure to the light, has become green, has lost its sugar, and may be freely used. Greens and spinach are allowed *ad libitum*, and so are watercress and green lettuce. Radishes and celery contain sugar, but only in small quantities, so that, although they are prohibited, they may be taken occasionally as a treat. All fruits contain sugar, and must be avoided.

Most people complain bitterly of the deprivation caused by cutting off bread. We are all so accustomed to its use, that it is no joke to have to do without it. There are several articles which are used by diabetics as substitutes for bread, one of the best being the "bran cake." The husk or bran of wheat is quite devoid of starch and sugar, and can consequently be used with perfect safety. When it is washed and ground it may be made up into a kind of bread with butter and eggs, and forms a valuable addition to the restricted diet. The following is the mode of making these bran cakes:—Take a quart of wheat bran, boil it in two successive waters for a quarter of an hour, each time straining it through a sieve; then wash it well with cold water on the sieve until the water runs through perfectly clear; squeeze the bran in a cloth as dry as you can, then spread it thinly on a dish, and place it in a slow oven. If put in at night let it remain till the morning, when, if perfectly dry and crisp, it will be ready for grinding. The bran thus prepared must be ground in a fine mill, and sifted through a wire sieve of such fineness as to require the use of a brush to pass it through. That which remains in the sieve must be ground again until it becomes quite soft and fine. Take three or four ounces of this bran powder, from three to seven new laid eggs, one or two ounces of butter, and about half a pint of milk. Mix the eggs with a little of the milk, and warm the butter with the other portion; stir the whole well together, and add a little nutmeg, ginger, or other spice, according to taste. Bake in small tins (patty-pans), which must be well buttered, in a rather quick oven, for about half an hour. The cakes when baked should be a little thicker than a captain's biscuit. They may be eaten with meat or cheese at breakfast, dinner, or supper, and at tea they may be taken with rather a free allowance of butter. It is very important to follow the directions given for washing and drying the

bran. If not properly washed the bran will not be freed from starch, and the patient will suffer; whilst if not properly dried it will be impossible to reduce the bran to a fine powder. In some seasons of the year, or if badly prepared, the cake soon undergoes a change; but this may be obviated by placing it before the fire for five or ten minutes every day. There is no difficulty in obtaining these "bran cakes" already made, as there are several bakers and confectioners in London and other large towns who prepare them. We, of course, cannot recommend any particular baker; but that is not a point which is likely to present any difficulty. For our own part, we must confess that we believe that it is better, if possible, to prepare the bread at home. It is not much trouble, and only requires a little practice to turn out a very palatable article. Moreover, you can vary the proportions of the ingredients according to taste. Some people buy the bran already prepared, and then make the biscuits. The bran biscuits have many advantages, but they are not free from disadvantages. Thus, many diabetics have loose or decayed teeth, and find some difficulty in masticating them. Sometimes the bran causes looseness of the bowels, or even decided diarrhœa.

Another substitute for bread will be found in "gluten bread." This is prepared by washing out the starch from wheaten flour, and then using the remaining gluten for making cakes and loaves. It is sometimes made into little buns, which are by no means bad to eat. The gluten may be obtained ground down into a meal, and is used for thickening broths and making puddings. Gluten bread is not without its objections: for although some people like it, others complain that when they get it into the mouth it seems as if they were chewing so much india-rubber.

Of late years rusks and biscuits have been prepared with eggs from sweet almonds ground to powder, and deprived of their starch by pouring over them boiling water slightly acidified with tartaric acid. They are often relished for a change. Many patients consider it a great hardship to have to do without sugar, and complain that their tea and coffee is to them bitter and unpalatable. We believe that the liking for sweets is purely a matter of habit, which can readily be overcome. Still, as many who are not allowed to take sugar insist on having their eatables and drinkables sweetened, some way has to be found of getting over the difficulty. Saccharine—the full scientific name for which is Benzoylsulphonicunide—is an excellent substitute both for cane and beet sugars and may be taken by diabetics with

perfect safety, as it passes through the system unchanged and exerts no injurious effect on the animal economy. It may be obtained in tabloids, one or two of which may be used in place of as many lumps of sugar. A very good sweetening agent for home use is made by dissolving by means of heat one drachm of soluble saccharine in a pound of pure glycerine. This mixture resembles very closely both in colour and taste the best white honey, and mixes readily with tea, coffee, and other beverages. Saccharine may be taken for almost any length of time without producing any injurious effect.

We must next consider what may be taken in the way of beverages. Sweet wines, sweet ales, porter, and stout should be avoided; but dry sherry, claret, bitter ale, and occasionally a little brandy or whisky, are allowable. Amongst non-stimulating beverages, tea and coffee (without sugar), and cocoa from the nibs may be used. There is no objection to soda water, but lemonade contains sugar. No advantage has been found to be derived from curtailing the amount of fluid taken. It is sometimes recommended that all fluids should be taken tepid, as they allay the craving for liquid more effectually than when cold.

The following table will, we trust, be found useful:—

DIET TABLE FOR PEOPLE SUFFERING FROM DIABETES.

May eat

Butchers' meat of all kinds, except liver.
 Ham, bacon, or other smoked, salted, dried, or cured meats.
 Poultry. Game.
 Fish of all kinds, fresh, salted, and cured.
 Soup (except vegetable soup), beef tea, and broths.
 Bran, gluten, or almond substitutes for bread.
 Eggs dressed in any way.
 Cheese. Cream Cheese.
 Butter. Cream.
 Greens. Spinach.
 Watercress. Mustard and cress. Green lettuce.
 Celery and radishes occasionally. Spring onions.
 Jelly, flavoured but not sweetened.
 Blancmange, made with cream but not milk.
 Custard made without sugar.
 Nuts of any description, sparingly.

Must avoid eating

Sugar in any form.
 Bread, wheaten or otherwise.
 Rice. Arrowroot. Sago. Tapioca. Macaroni. Vermicelli.

DIET TABLE FOR PEOPLE SUFFERING FROM DIABETES (*continued*).*Must avoid eating*

Potatoes.	Carrots.	Parsnips.	Turnips.
	Peas.	French Beans.	
	Cabbage.	Brussels Sprouts.	
	Asparagus.	Seakale.	
Pastry and puddings of all kinds.			
Jams and marmalade.			
Fruit of all kinds, fresh and preserved.			

May drink

Tea.	Coffee.	Cocoa from nibs.
	Dry sherry.	Claret.
Brandy and spirits that have not been sweetened.		
Soda water.	Seltzer water.	Vichy water.
Bitter ale, sparingly.		

Must avoid drinking

Milk, except sparingly.		
Sweet ales, mild and old.	Porter and stout.	
All sweet wines.	Port wine.	Champagne.
Liqueurs.		

The general mode of life to be adopted by the patient is that common to most chronic complaints. It consists essentially in avoiding excesses of all kinds. A warm bath once or twice a week promotes the action of the skin, and adds greatly to the patient's comfort. The Turkish bath often proves beneficial.

We must next consider the medicinal treatment of diabetes. Opium frequently proves of considerable benefit, often quickly reducing the quantity of urine passed. As there is a great tolerance of opium in confirmed diabetes, large doses will have to be given. In the case of an adult, it would be well to commence with one-grain doses, but two, three, and five grains three times a day are generally well borne. It should be given in the form of the compound soap pill.

Phosphoric acid often proves of value. It is especially indicated when frequent urging to urinate, pain in the loins, emaciation, and prostration are prominent symptoms, and it is particularly useful in cases of nervous origin. Improvement quickly follows its use, both in the general health and in the condition of the urine. It should be given in two or three-drop doses in a tea-spoonful of water every two hours.

Bromide of sodium (T. 19) has been used with success in some cases.

Nitrate of uranium has sometimes proved efficacious. It not only quickly reduces the quantity of urine, but restores the strength and improves the general condition; the dose is one-sixth of a grain in water three times a day, or a smaller dose more frequently.

The liquid extract of ergot, given in thirty-drop doses in water three times a day, has proved of such signal benefit in diabetes insipidus that where other remedies have failed we should advise a trial of it in saccharine diabetes.

There is one special form of treatment to which some reference must be made. It is known as the "skim milk" treatment. Several cases are reported in which the quantity of urine was steadily and greatly diminished and the specific gravity correspondingly reduced, by restricting the patient to a daily allowance of six pints of skimmed milk. It has the great advantage that it can be adopted without in any way interfering with the patient's ordinary occupation. The skim milk is the only food allowed; and nothing else of any kind is to be taken. The quantity of milk should be fixed, and it should be taken at definite times, so as to constitute meals. It will probably have to be continued for six weeks, and then any kind of animal food may be allowed once or twice daily; bran bread, gluten bread, etc., being gradually added to the dietary. Equally satisfactory results may be obtained from the use of certain forms of condensed milk.

This, then, completes our account of diabetes mellitus, and we must now consider the other form of diabetes.

Diabetes Insipidus.—In this complaint, as we have already seen, the patient passes very large quantities of water, but it is free from sugar or other abnormal ingredient.

The quantity of urine secreted by persons affected with insipid diabetes is usually greater even than in saccharine diabetes; and it is not uncommon for fifteen, thirty, or even forty pints to be passed in the twenty-four hours. We at one time had under our care a man who habitually passed twenty-two pints of water in the course of the day and night. He was kept under constant supervision, and the urine was carefully measured, so that there was no mistake about it. He usually had to pass his urine two or three times in an hour, and was on this account unable to go to church or to any place of amusement. He usually had a slop-pail under his bed in addition to two ordinary chamber-utensils. In the case of another patient, it was stated that the ordinary chamber-utensil was "not a bit of good to her," and she was always obliged to have a big pail in her room. The urine is generally

of a light straw colour, clear and free from deposit. Its specific gravity is always very low, and in this respect it presents a marked contrast to the urine passed in diabetes mellitus. Sometimes, in fact, it is very little heavier than water, so that the urinometer may stand at 1,001 or 1,002. This thin, limpid urine decomposes very rapidly, and usually becomes extremely offensive after standing for even a very short time.

The intense thirst experienced in these cases is one of the most distressing symptoms. The patient to whom we have referred assured us that he had drunk as much as twenty-two quarts in the twenty-four hours. He had measured it on several occasions, when this had been the quantity. He seldom drank less than a quart at a time. He went out as much as possible to "keep away from the water." He generally kept a little pebble in his mouth to check the sensation of thirst. His sufferings when he was unable to get water were very great. He said he should never forget one day when he was left alone in the house, without anything to drink. He was laid up at the time, and too weak to get about. Patients thus situated have been known to resort to the most revolting expedients in order to allay the pangs of thirst.

The appetite is variable; sometimes it is voracious, but more commonly moderate or indifferent. Our patient often went for days together without touching meat. On one occasion he stated that he had had nothing to eat but half a half-penny biscuit for four days. He had "no appetite, and could not eat anything." He was usually a week or more without having a motion, and had sometimes gone from a month to six weeks. The fæces were very hard, and were passed with great difficulty.

As might be imagined, the skin is usually dry. Our patient could walk as fast as he liked, even in the hottest day in the summer, without perspiring about the body. We remember a little boy who suffered in the same way, and whose mother declared that she believed that he had perspired only once in all his life. Diabetes insipidus is a complaint which is usually unattended with pain; but this little boy suffered greatly from cramps in the legs. He, like most diabetics, suffered greatly from cold. He "was always over the kitchen fire, and you could not get him away from it." Our man stated that "as soon as he got away from the fire he was all of a shake."

Loss of flesh, general weakness, and inaptitude for work are usually prominent symptoms.

Insipid diabetes occurs more commonly in men than in women. It may occur at any age, but the majority of cases are met with in

people below thirty. In one or two instances the disease appears to have actually existed from birth. It is difficult to say what it arises from. In a very large proportion of cases no exciting cause whatever could be assigned, and the patient had no idea what brought it on. In some instances it seems to have followed exposure to cold, and in others to have arisen from muscular exertion. The patient to whom we have so frequently referred was able to speak very definitely as to the origin of his complaint. On a bitterly cold winter's day he had run as hard as he could for a distance of four miles. He was "dripping wet" and the perspiration was running off him; but before he had time to get cool he had to drive a pony-chaise home a distance of six miles. That was the commencement of his illness.

Some patients suffering from diabetes insipidus have an intense dislike for vegetable food, whilst others care for nothing else. Some are very sensitive to alcoholic drinks, whilst others exhibit a remarkable tolerance of stimulants. The French physician, Trousseau, relates the case of a man who from the commencement of his illness had acquired a remarkable immunity from the causes of drunkenness. He had frequently drunk a litre (a pint and three-quarters) of brandy in two hours without inconvenience. On one occasion he laid a wager that he would drink twenty bottles of wine at a single sitting, and he won it, without the least disturbance of the nervous system.

Is this complaint curable? What is the best method of treating it? We believe that there is no remedy equal to the liquid extract of ergot. The dose is thirty drops in a little water three times a day, or half the dose six times a day. Measure all your water passed in the twenty-four hours for several days before you begin the treatment, and continue to do so whilst taking the medicine. If your urine decreases in quantity you will have a good proof that it is doing you good. Do not be disappointed if you fail to perceive much improvement for the first week; the medicine takes a little while to do its work. We once saw a man's urine reduced from twenty pints to the normal quantity in less than a month, and all his distressing symptoms left him. When you have got your water down to three pints in the twenty-four hours you had better discontinue the medicine. If you will take the trouble to take the specific gravity of your urine every day, you will find that it rises as the quantity of water passed decreases, and this of course is a good sign. In the man to whom we have referred the specific gravity of the urine rose under the treatment from a little over 1,000 to 1,017.

We have known cramps in the legs occurring in a patient suffering

from insipid diabetes quickly cured by the ergot. Of course, in the case of children and young people smaller doses than we have mentioned should be given.

Although we have the greatest faith in the ergot as a remedy for insipid diabetes, we must not neglect to mention other remedies. Common nitre is often given with success. The best way is to buy half an ounce of nitre, shake it up in a pint bottle of water, and take a tea-spoonful every hour or every two hours. The urine should be measured, to see what effect it has on the quantity.

The use of valerian in large and repeated doses has sometimes been attended with success. The application of a blister to the nape of the neck has in some cases done good, but in others it has succeeded better when applied to the pit of the stomach.

There is no occasion to restrict the diet in any way in the insipid form of diabetes. You may eat what you like, and as much as you like. Enforced abstinence from fluids aggravates most of the symptoms; the skin becomes unbearably hot, a sense of intolerable sinking, or even of intense pain, is felt at the pit of the stomach, and the mind becomes confused. Only take one medicine at a time, and give it a fair trial. Do not say that it is useless because you are not cured straight off. Chronic diseases often take a long time to get rid of, as you have probably already discovered.

Ought you to go to a doctor? Certainly, or you may possibly make some mistake as to the complaint from which you are suffering, and the doctor is the best guide as to the method of treatment to be pursued.

DIARRHŒA, OR LOOSENESS OF THE BOWELS.—There is no complaint more common, and none which requires greater care for its successful treatment, than diarrhœa. It may be dependent on so many different causes, that it is absolutely necessary that the individual case should be thoroughly investigated before any treatment is commenced. People often ask, "What is the best thing for diarrhœa?" and in answer to this question we can only say that there is no best remedy, and that the treatment must depend entirely upon the nature of the case. It is quite true that a general diarrhœa mixture is kept at most of our hospitals, and is given away during the summer months, but this necessarily fails in a large number of cases. A remedy which would prove beneficial in one instance, or in one form of diarrhœa, might in another prove utterly useless.

In examining a bad case of diarrhœa, either in a child or in an adult, we must learn all we possibly can, either from the patient or the friends, respecting the onset of the attack and its subsequent progress. We must try to find out what was the exciting cause, and from what other symptoms the patient is suffering, as a consideration of these circumstances will do much to enable us to arrive at a correct conclusion in the choice of our remedy. The motions should be seen, so that their characters may be determined, and as much information as possible derived from this source.

There is so great a diversity in the symptoms which accompany diarrhœa, that there is scarcely any phenomenon common to all the varieties, except that the stools are more liquid, frequent, and copious than in health. The evacuations may be very few, not exceeding two or three daily, or so frequent that the patient scarcely satisfies one call before he experiences another. There is generally more or less pain before the evacuations, which are almost always followed by relief; but in some cases, no pain whatever is experienced throughout. Along with the discharge is occasionally a very disagreeable sinking sensation in the abdomen, with a general feeling of exhaustion or faintness, a cold skin, and a feeble, irregular pulse. Diarrhœa is sometimes attended with fever, but in most cases it is absent. The skin is usually dry and the urine scanty. Every possible diversity exists in the degree, duration, and danger of the complaint. It may be quite trivial, getting well in a day or two without aid, or it may run on for months, or even years, resisting every variety of treatment. In some cases death ensues rapidly from great exhaustion; but more commonly a fatal termination is preceded by slow emaciation and gradual loss of strength. In the large majority of cases the attendance of a medical man is unnecessary, and a little judicious treatment is followed by a rapid cure. At the same time, it must be remembered that simple diarrhœa passes almost insensibly into the graver form. It is a golden rule that if you are in any doubt about sending for the doctor, you had better do so. If you err, err on the right side.

Diarrhœa is a prominent symptom of many diseases. It is an essential part of cholera, dysentery, and typhoid fever, and is too frequently an accompaniment of the last stage of consumption. It often proves the immediate cause of death in people who have been long confined to bed by chronic illness.

Diarrhœa, however, is not unfrequently the sole, or at all events the essential, cause of complaint. It is the disease itself, and not a mere symptom of some other malady.

The causes of diarrhœa are numerous, one of the most common being some error in diet. It may be the result of over-eating and drinking, or of taking some particular article of food which has disagreed with the stomach and set up irritation. People after a large dinner not uncommonly suffer from diarrhœa. It is usually attributed to the salmon or oyster-sauce, or to some perfectly innocent article, whereas in reality it is due to the mixture of the various kinds of food and drink, and more especially to the actual quantity taken. The stomach and bowels not unnaturally rebel when made the receptacle of such a heterogeneous collection of substances. There are certain articles of diet, however, which undoubtedly have a strong tendency to provoke diarrhœa; and amongst these comparatively indigestible substances we may enumerate unripe fruit, raw vegetables, sausages, pork, veal, goose, duck, etc. Many kinds of shell-fish, such as lobsters, crabs, and mussels, are apt to act as irritants. Putrid food, or, to use the more refined phraseology of gastronomers, food which is high, has the same effect on many people, who would consequently do well to take their venison and game with a certain amount of caution. Articles of diet which are in themselves perfectly good and wholesome, often cause diarrhœa when resorted to for the first time. This is, in all probability, the explanation of the free purging from which many of us suffer on our first visit to the Continent. Bad cooking may lead to diarrhœa, and has sometimes caused quite an epidemic in large establishments.

Impure water is another common cause. Water contaminated with decomposing animal matter, or with sewage or sewage gas, is pretty certain to cause diarrhœa, either at once or gradually, according to the degree of impurity and the quantities in which it is consumed. Symptoms resembling those of cholera are sometimes produced by drinking the waters of the Volga, which are impregnated with sewage. In St. Petersburg, the water of the Neva, which is rich in organic substances, gives diarrhœa to strangers. When diarrhœa prevails over a limited area, as in only a certain row of houses, the condition of the water supply should always be investigated.

Bad smells often give rise to diarrhœa. Many people who live in the neighbourhood of grave-yards suffer in this way. The smell from a newly-opened cesspool, or the emanations from a manure heap, or, worse still, a manure manufactory, have been known to have the same effect. Medical students when first they commence dissecting, or at later periods of their career, if they apply too assiduously, are often sufferers.

Worms are not unfrequently the cause of looseness of the bowels, not

only in children, but also in adults. The round worm, as a rule, causes more irritation than the tape-worm.

Mental emotions, more especially fear and anxiety, sometimes act as an exciting cause. The anticipation of any unusual ordeal, such as speaking in public, going up for an examination, or the thoughts of a surgical operation, may induce diarrhœa. A sudden panic will operate on the bowels of some persons as *surely* as a black dose, and much more *speedily*. Sudden atmospheric changes, or the removal from a warm to a temperate climate, will often bring on an attack of diarrhœa. In women it is sometimes induced by getting chilled in damp, cold places. Standing for some time on stone flags has been known to excite it.

Summer diarrhœa, or choleraic diarrhœa, or English cholera, as it is often called, is prevalent in this country from June till the end of September. It is as constantly observed when the temperature rises above 60° as are coughs and colds when it falls below 32°. The attack is generally sudden. At first the ordinary contents of the bowels are discharged, and then a large quantity of fluid is expelled, both by purging and vomiting. The stools are copious and watery, dark-brown or green in colour, and are often shot out with a considerable amount of force. The seizure is often accompanied by colic and pain in the region of the navel. Exhaustion may ensue very rapidly, so that in a few hours the pulse becomes weak, the voice feeble, the temperature of the body reduced, and the patient passes into a very critical condition. Sometimes the disease resembles in its intensity Asiatic cholera, and death may ensue rapidly.

Sometimes diarrhœa is met with in the chronic form, and this is by no means uncommon in "old Indians," whose health has deteriorated from a long residence in a tropical climate. There is one form which is commonly known as "white flux," from the paleness of the stools. This complaint usually begins without any particular symptoms beyond those of relaxed bowels. Sometimes there are two or three motions in the twenty-four hours, the stools being liquid and frothy, and having the appearance of chalk and dirty water, or being of the consistence of thick gruel. The health is gradually undermined, the motions increase in size and frequency, and unless treatment proves successful in arresting the complaint the most serious consequences may follow.

There is another form of diarrhœa which, although not very common, we should be loth to pass over in silence. Many unquestionable instances are recorded, both in ancient and modern literature, of persons who, while suffering from diarrhœa, have voided oil or fat. In

one instance a woman discharged every day for fourteen months a considerable quantity of yellow fat, that lay upon the motions like melted butter. We are told that when voided into a vessel of water it floated like oil upon the surface, and when cold it assumed the consistence and appearance of fat. Like fat, it was inflammable and burned with a bright flame. In another case a portion of the substance was analysed, and was found to consist of true fat. In several cases this condition has been found after death to be associated with disease of the pancreas, or sweetbread. We know nothing about the treatment; but a lady who suffered from this complaint recovered after swallowing a pint of sweet oil. A late distinguished physician, upon this hint, gave his patient, who was labouring at the same time under diabetes, a quarter of a pint of olive oil, and from that time the voiding of fat diminished and soon after ceased.

In cases of chronic diarrhœa the possibility of slow poisoning must be taken into consideration. Even if the symptoms have been caused by the introduction of poison into the system, it does not follow that it has been administered intentionally. There are several cases on record in which obstinate diarrhœa has resulted from living in a room hung with paper containing arsenic. If you have any reason to suspect that poison is being secretly administered, it is your duty to at once call in a physician on whom you can place the most implicit reliance, and put the whole circumstances of the case before him. It too frequently happens that the patient himself is so weakened and debilitated by his complaint that it would be useless, or worse than useless, to communicate your suspicions to him. You must remember that whatever is done must be done quickly; prompt action in such a matter may avert a great calamity. An examination or analysis of the patient's urine will in most cases show whether your suspicions have been well founded.

We must now pass on to the consideration of some of the most approved methods of treating the various forms of diarrhœa. When the complaint is dependent upon the presence of some irritant in the bowels, such as any of the different kinds of indigestible food of which we have already spoken, we cannot expect to do much good until we have got rid of the offending body. Castor-oil is often used for this purpose, and usually acts admirably. Another good remedy is rhubarb, which has this advantage: that it acts first as a purgative, and expels the irritant, and then as an astringent, and checks the diarrhœa. For adults it is conveniently given in the form of compound rhubarb

pill, and for children as Gregory's powder (T. 66). This may be followed, if necessary, by one or two table-spoonful doses of the ordinary chalk mixture, or of the diarrhœa mixture (Pr. 28). These are simple enough cases, and seldom give any trouble or anxiety.

Camphor in the form of the essence or the tabloids is the recognised remedy for diarrhœa excited by the effluvia of drains, but arsenic (Pr. 40, T. 7) often proves useful.

Diarrhœa which has been induced by mental emotion is said to be often cured by the tincture of gelsemium, given in two-drop doses every ten minutes for an hour. The complaint is so common amongst public men, that any trustworthy means of treatment must be regarded as a boon. In diarrhœa arising from fright, small doses of laudanum (T. 49) may be given with advantage.

When the diarrhœa is attended with fever—in other words, by elevation of temperature, as shown by the thermometer—aconite is indicated. A tea-spoonful of the aconite mixture (Pr. 38), or one of the tabloids (T. 1), may be given every ten minutes for the first hour, and subsequently hourly. Should this fail, Pr. 48 may do good.

The remedy on which we place the greatest reliance in the treatment of summer diarrhœa is undoubtedly camphor. It is of inestimable value in the diarrhœa which is often epidemic during the hotter months of the year, and is especially indicated when the onset of the attack is sudden. Even when the strength is sinking rapidly, as the result of the excessive purging, and the face is pale and livid, and the body is icy cold, camphor will restore warmth to the extremities, and rescue the patient from an apparently almost hopeless state. It is essential to give the strong preparation—the essence of camphor; give it frequently; and give it as soon as possible, for every moment's delay is of importance. The dose is from three to five drops every ten minutes or a quarter of an hour till the symptoms abate, and hourly afterwards. It is a good plan to mix it with a little brandy, but it answers admirably if given in milk or on sugar. If the essence of camphor is not at hand, the camphor tabloids will answer admirably. The tincture of cinchona or bark also gives good results in the treatment of these cases. It should be given in drop-doses after every loose motion.

In summer diarrhœa, and, for the matter of that, in all kinds of diarrhœa, the greatest attention must be paid to the diet. It is of not the slightest use giving solid food, for it will only be ejected immediately. The best thing is for the patient to take nothing but fluid nourishment,

and to take it cold. Get a tumblerful of milk, and put in it a table-spoonful of brandy and a few pieces of ice; give the sufferer only a tea-spoonful at a time. If you give more at first it will be almost sure to excite the vomiting and purging. When you find this small quantity is retained, you can gradually and carefully increase the dose. You will remember that milk is extremely nutritious, and that if the patient can take this and digest it he is in no danger of being starved. When the stomach is very irritable the following will often prove useful:—Take a table-spoonful of cream and beat it up thoroughly with the white of a new-laid egg. Add slowly to the froth of the mixture thus obtained a table-spoonful of brandy, in which a lump of sugar has been dissolved. As a rule, we prefer the iced brandy and milk.

In many of the chronic forms of diarrhœa, and more especially in the “white flux” of the “old Indian,” great benefit will be experienced from the administration of arsenic. A tea-spoonful of the mixture (Pr. 40), or one of the tabloids (T. 7) should be given three or four times a day, or after every loose motion. Small doses of mercury, given frequently, as in Prs. 48 and 71, will often do good. It is essential in these cases to endeavour to improve the general health, and tonics will often afford much more satisfactory results than astringents and diarrhœa mixtures. The acid and gentian mixture (Pr. 15), or the perchloride of iron mixture (Pr. 1), or T. 65 and 79, will do much to give tone to the system. In obstinate cases, the adoption for a time of an exclusively milk diet will effect a cure.

When the complaint has been contracted in a malarial, *i.e.*, aguish, district, or the patient has previously suffered from ague, a course of quinine (Prs. 9 and 10, or T. 63 and 64) will often afford the happiest result.

There are many other valuable remedies for diarrhœa besides those to which we have already referred. We will enumerate the chief, giving after each a short description of the class of cases in which it has proved most useful.

Camphor.—We have already spoken of the value of this drug in the treatment of summer or choleraic diarrhœa. The great indication for its employment is the *suddenness of the attack*. But it may be said, “Surely diarrhœa always comes on suddenly; you would not expect it to take a month about it.” That is quite true, but some kinds of diarrhœa come on very much more quickly than others. You are in the midst of an animated conversation, let us say, when suddenly you feel

that if you cannot make some excuse to get away something dreadful must happen. That is just the case for camphor; and the more startling and unexpected is the onset of the attack, the greater is the probability that camphor will do good. The motions in these cases are usually *watery, and dark in colour*. When there is coldness of the surface of the body, camphor will usually quickly restore warmth to the extremities. It is the best remedy for that form of diarrhœa which is excited by standing on cold stones. We have already insisted on the fact that if camphor is to do good it must be given early and frequently. The dose is from four to six drops of the essence of camphor every ten minutes till the symptoms abate, and hourly afterwards, or one of the camphor pilules may be given in a similar manner.

Mercury, in small doses, is an excellent remedy for many forms of diarrhœa. It is useful when the patient voids *pale, clayey, or pasty stinking* motions, and at the same time suffers from acidity, flatulency, a furred tongue, a little yellowness about the eyes, or other symptoms of deficient action of the liver. It is also indicated when the motions are passed with pain and straining, and are very *slimy, and perhaps mixed with blood*. It will also do good when some ten or a dozen *watery, offensive, muddy-looking, or green-coloured* stools are passed daily. It will be given either as Pr. 48 or Pr. 71. One of the grey powder tabloids (T. 42) every hour for six hours will be found to answer well in these cases.

Podophyllum is especially indicated in *morning diarrhœa*. The motions are usually *high-coloured*, and their passage is attended with sharp, cutting pains. The Pr. 51 will be found useful.

Arsenic is useful in autumnal diarrhœa. The motions are usually *watery, slimy, and green or brown*. It will nearly always succeed when a *burning sensation attends the effort of expelling the motion*. Another indication for its employment is the occurrence of the *diarrhœa immediately after eating or drinking*, a form which is not at all uncommon in sufferers from indigestion. A tea-spoonful of the arsenic mixture (Pr. 40) should be given every four hours, or after every loose motion. In place of the mixture the arsenic tabloids (T. 7) may be given—one every hour for four or five hours.

Pulsatilla is serviceable in diarrhœa arising from indulgence in *rich, indigestible food*, such as duck or pork. It is especially useful when the motions *differ from one another in colour*. A drop of the tincture of *pulsatilla* should be given in water every ten minutes

for the first hour, and subsequently hourly until an improvement is noticed.

Ipecacuanha should be given when the diarrhœa is attended with nausea or vomiting, paleness of the face, weakness, and a desire to remain lying down. It does most good when the stools are slimy, green or not, with or without blood. The dose is a tea-spoonful of the ipecacuanha mixture (Pr. 50) every hour or a smaller quantity more frequently.

Colocynth is indicated when the diarrhœa is attended with griping.

Nux vomica is the remedy for diarrhœa alternating with constipation. The motions are usually scanty, and often mixed with slime or blood. It may be given in the form of Pr. 44 or T. 57, a dose every hour for four hours.

Cinchona or bark is useful when the diarrhœa was excited by over-indulgence in fruit. It is also useful when it is most troublesome at night. The motions in this kind of diarrhœa are usually liquid, and brownish in colour. A drop of the tincture of bark should be given in water every ten minutes for the first hour, and then hourly.

Chamomile is the best remedy for diarrhœa occurring in fretful children, especially when they are teething. The motions at these times are usually watery, bilious, green, yellow, or slimy, or smelling like rotten eggs. Half a tea-spoonful of chamomile-tea should be given every ten minutes for the first hour, and subsequently hourly, or after every loose motion.

Lime water is often of great benefit in young children suffering from chronic vomiting and diarrhœa, and consequent wasting. It improves the digestion and removes the irritating condition of the urine, which is so common an accompaniment. It neutralises any excess of acid that may be present in the bowels. It may be given in milk: one part of lime water to three of milk. The milk should be peptonised.

Opium is an excellent remedy in almost all kinds of diarrhœa, although it must be confessed that in this, as in the case of several of the following, the indications for its employment are not as yet very strictly defined. It may be given in the form of laudanum in a twenty-drop dose in a little water. This is for an adult; it must never be given to children.

Acetate of lead (sugar of lead) is another good remedy. It should be given in five-grain doses every four hours, as in Pr. 30. It will also arrest bleeding at the same time. It is suitable for obstinate cases.

Oxide of zinc is also useful in diarrhœa. It may be given in the form of the pills (Pr. 66), two to be taken every three hours.

Sulphate of copper, or blue stone, is sometimes used in obstinate cases. It is a very powerful astringent, and should be used with a certain amount of caution, and only in severe cases. The same may be said of nitrate of silver. Either may be given in half-grain doses made into a pill.

Gallie acid, *tannic acid*, *catechu*, and *kino* are all useful in simple cases of diarrhœa, and a mixture containing several of these astringents may be given. The tannin tabloids (T. 76) are useful.

Bismuth is a remedy which often succeeds when everything else has failed. A drachm of the nitrate of bismuth should be given in milk several times a day. This dose is larger than is usually recommended, but it will not disturb the stomach or cause any inconvenience. It is a remedy of which we can speak highly in obstinate cases. Children do very well with smaller doses, but on the Continent they are frequently given from thirty to sixty grains hourly.

Chlorodyne is a remedy not to be despised. It is not a great favourite with doctors because it is a patent medicine, but that is a matter of very little consequence if it will cure you.

These are the remedies to be given by the mouth, but sometimes, when the case is urgent, it is absolutely necessary to give an enema or injection. The quantity of fluid employed for the injection should be small, or the bowel will contract and expel it, whereas it is desirable that it should be retained as long as possible, in order to exert its influence. An injection of an ounce (two table-spoonfuls), or at most two ounces, is sufficient for an adult; and it may be repeated several times a day, according to the urgency of the symptoms. The material used for these injections is starch and water of the consistence of cream, and of about the heat of the body. A starch injection alone is often useful, but its astringent and sedative action is greatly heightened by the addition, for an adult, of twenty drops of laudanum. Five grains of acetate of lead added to the injection will do much to increase its efficacy. An injection will often save a life that appeared almost hopeless. Sulphate of copper or bismuth may at the same time be given by the mouth.

Many doctors employ cold or tepid packing in diarrhœa, especially in the summer diarrhœa of children.

In obstinate chronic cases of diarrhœa, and particularly in the "white flux," good results are often obtained by directing the attention

to the diet. It is a good plan for the patient to put himself temporarily on a restricted diet, and he may with advantage confine himself exclusively to milk. The milk is more readily digested if peptonised or mixed with a fourth part of lime water. In summer it is pleasanter to have the mixture iced. The quantity taken need not be limited, but it is advisable to take it at regular intervals. If the patient has been accustomed all his life to the use of stimulants, he will at first find a little difficulty in doing without them, but it is imperative that he should make the effort, at all events for a time.

The patient should be very careful about his clothing. He should wear flannel next the skin, and should have, in addition, a flannel bandage round the abdomen. He should keep as much as possible in a uniform temperature, and should be very particular to avoid draughts and chills. In wet or unfavourable weather he should remain indoors.

When there has been a distinct improvement, the patient may gradually and cautiously return to his ordinary diet. He must, however, still be very abstemious both in eating and drinking. Beef tea, mutton broth, or a raw egg beaten up with milk and flavoured with a tea-spoonful of brandy, is generally well borne. The following will form an agreeable variety:—Boil a pint of new milk, with sufficient cinnamon to flavour it pleasantly, and sweeten with white sugar. This may be taken cold with a tea-spoonful of brandy, and is useful in many forms of diarrhœa. Tea, and more especially coffee, are to be avoided. Wines and spirits of all kinds are bad. The diet will, at first, be to some extent experimental. The sufferer must feel his way, and find out for himself what he can take with safety. He must exercise the greatest moderation both in eating and drinking. He must be very careful not to take too much of anything, and should he make a mistake he must take care not to repeat it.

Some people would say that life was not worth living for under these conditions. Let them try, and we think they will soon change their opinion. Moderation both in eating and drinking is essential for the attainment of true happiness.

When diarrhœa is prevalent in a house or in a particular locality, it is a pretty good proof that there is something the matter with either the water supply or the sanitary arrangements. The pipes should be inspected and care should be taken that they are disconnected and also properly ventilated. The cisterns should be cleaned out and the closets periodically flushed with a disinfecting solution. In the country the

soil around the house should be scavenged, and all refuse matter should be burnt and the ashes dug into the soil. Walls and fences should be linewashed, and particular attention should be paid to privies, disused cesspools, manure heaps, pig-styes, and stables. The work should be carried out systematically and at stated intervals. The free use of the antiseptic solution mentioned in the article on CHOLERA will be found necessary.

DIPHTHERIA.—Considerable diversity of opinion exists amongst medical men as to the true nature of diphtheria. Speaking generally, however, and without any pretension to scientific accuracy, we should say that it was a malignant sore throat, attended with the formation of a membrane.

Few diseases are more dreaded both by patients and their doctors than diphtheria. It is a disease which must have been known as long as the history of man extends, but it is only during the last twenty or thirty years that attention has been especially directed to it in this country. Many men now living were in practice in London for more than a quarter of a century before ever meeting with a case, although it was common enough on the Continent. In 1855 it was alarmingly prevalent at Boulogne, and it presently appeared among us in the form of a most fatal epidemic. The epidemic reached its height in 1858 and 1859, and during those two years it is estimated that over twenty thousand people died from it. Since then, isolated cases have been of frequent occurrence all over the country. A medical man in active practice seldom goes more than three or four months without seeing a case.

Diphtheria is a disease which attacks children more frequently than adults, and girls more commonly than boys. It may occur at any season, and is little affected by either heat or cold, draught or rain. In different epidemics it has been found that neither the heat of the dog-days nor the frost of winter affected the prevalence of the disease. Its development is apparently particularly favoured by poverty and uncleanness, for it quickly invades the hovels of the poor, where too frequently men and animals are crowded together under the same roof, and dung-heaps, privies, and other sources of putrefaction fill the air with their effluvia. It very often breaks out in factories, schools, and barracks, which not uncommonly are insufficient in size or defective in ventilation. But even families and people who live under much more

favourable conditions are not spared, and children who enjoy the best of care and nourishment are frequently seized and carried off by this fatal disease. Some people appear to be much more susceptible to its influence than others; thus of two families residing in the same house, and apparently under identical conditions, one has suffered severely, whilst the other has entirely escaped. A difference of susceptibility is also observed in members of the same family, and this is not always in favour of the more robust. It is said that people of great mental activity and a high degree of nervous susceptibility are especially prone to suffer from the disease.

Is it contagious? Undoubtedly. We know that it is contagious, although we are not acquainted with the exact mode in which the contagion operates. The infectious matter is not capable of any wide diffusion through the air, but it clings in the most persistent manner to particular places, houses, and even rooms. There is very little doubt that it can be inoculated. M. Valleix, a well known and esteemed French surgeon and writer, was in attendance upon a little girl suffering from diphtheritic sore throat. Under energetic treatment she recovered. One day, however, while M. Valleix was inspecting her throat he received into his mouth a small quantity of saliva driven out of that of the patient in the act of coughing. Next day a little exudation appeared on one of his tonsils. The other tonsil and the adjacent parts became speedily covered with false membrane, a profuse discharge took place from the nostrils, delirium supervened, and in forty-eight hours M. Valleix was dead. In another case of diphtheria the medical man in attendance found it necessary to open the windpipe to relieve the breathing. There was some obstruction from the accumulation of blood, when the operator, to save the patient's life, applied his mouth to the wound in the neck, and sucked the fluid out. In forty-eight hours he died from symptoms identical with those from which M. Valleix suffered.

There is very little doubt that diphtheria is often produced by drinking infected milk. The medical officer of the Local Government Board in his report on diphtheria for the year 1888-9 says:—"Dissemination of diphtheria by milk is now in this country so generally accepted and has, moreover, unhappily been so often demonstrated that the fact of such dissemination of the disease needs not to be insisted on."

Do people ever have diphtheria twice? There can be no doubt that a person may suffer from it any number of times. The fact of having had and survived the disease does not grant that immunity against a

second attack which is so markedly a characteristic of measles, scarlatina, and small-pox.

Diphtheria usually begins, both in adults and children, with marked symptoms of fever, there being an elevation of the temperature of the body by four or five degrees, and an increase in the rate of the pulse which is often very marked. Sometimes the attack begins with a little sensation of chilliness, but it is never ushered in with that marked shivering which occurs in some other fevers. The patient usually complains of a stupid feeling, of pain in the head and neck or in the loins, of debility, weakness in the limbs, and increased thirst. Sometimes he is restless or inclined to be drowsy, or he may be sick. Children, when first taken ill, are apt to sleep during the day more than usual, and are restless or even light-headed at night.

Very shortly the patient experiences a sensation of dryness and burning in the throat, as well as pain on swallowing. If the space under the jaw be examined, some little hard tender lumps will be felt, which are the enlarged glands. If the throat be now carefully examined, it will be found to be of a dark-red livid colour, the uvula which hangs down at the back being swollen to twice its size. In a few hours the affected parts become covered with a false membrane, which is most marked on the tonsils and soft palate. This diphtheritic inflammation, with the formation of the membrane, is very prone to spread, both upwards to the back of the nose and downwards into the larynx and windpipe. At first the membrane is easily detached, and the tissues beneath are apparently healthy, but as it grows thicker and tougher it may be torn off in strips, and the subjacent structures will be seen to be raw and bleeding. As the local mischief extends the temperature of the body usually rises, and the general constitutional disturbance is increased. The difficulty in swallowing is in proportion to the amount of inflammation, swelling, and exudation. Wearisome and painful efforts to clear the throat are often occasioned by the abundant secretion of a thick tenacious mucus. In some cases the breath becomes extremely offensive. From the first there is usually a good deal of cough; but should the windpipe become affected both cough and voice assume a hoarse, husky, muffled tone, and a difficulty is experienced in breathing. During the whole course of the disease the bowels are either quite natural or they are confined, diarrhoea being very unusual.

For the symptoms of diphtheria as they occur in children consult article on diphtheria (DISEASES OF CHILDREN, p. 54).

Several varieties of diphtheria are recognised by medical men; in

some the symptoms are much milder than we have described, and in others they assume a more malignant type.

The great danger of the slighter forms is that they may be entirely overlooked. The patient is apparently so little indisposed that professional aid is not considered necessary, and the true nature of the complaint remains undetected. It may so happen that this is of very little moment to the patient himself, but it is a matter of the very gravest importance to all who have the misfortune to be brought in contact with him. This slight attack is capable of communicating to other people the disease in its most malignant form. It is difficult to over-estimate the serious consequences that might ensue from a case of this description being allowed to run loose in a school.

These slight attacks usually begin without any symptoms which might give warning to the patient or his friends of the approaching danger. There is a little fever or none at all; there is a trifling sensation of malaise, a little uneasiness in the throat, and a feeling of dryness or a slight pricking pain in swallowing. In adults these symptoms are very easily overlooked, and in children they cannot be ascertained. The glands of the jaw and neck swell moderately, and are somewhat tender or painful on gentle pressure, only in rare cases does this light form of the disease give rise to more marked symptoms. The fever is then more intense, the temperature of the body stands three or four degrees higher than normal, the skin feels dry and hot, the pulse is frequent and full, and the face slightly congested. The patient complains of heaviness about the head or of a sense of stupidity, of lassitude, increased thirst, and of an annoying or painful sensation on swallowing. Sometimes even there may be a little stomach disturbance and the patient may be sick; still, after a short time—usually in the course of from twelve to twenty-four hours—these symptoms disappear as quickly as they came, and the patient soon forgets all about what he characterises as his little temporary indisposition.

If, however, we could have examined his throat, we should have found that it was in places swollen and of a vivid red colour. A few hours later a number of greyish-white or whitish-yellow spots would have been seen, perhaps confined to one tonsil and a little of the adjacent tissues, and we should then have entertained no doubt as to the true nature of the disease. The diphtheritic membrane gradually clears off, and in a few days the attack may be over; or, on the other hand, the termination may be less favourable.

It should always be remembered that in these cases the absence of

fever and general constitutional disturbance is no guarantee that mischief is not going on in the throat. The temperature may be scarcely elevated above the normal, the pulse may be but slightly accelerated, the difficulty in swallowing may be nearly gone, and the general condition apparently quite satisfactory, and yet the formation of the diphtheritic membrane may be gradually extending. On the fourth, or perhaps the sixth, day the temperature may suddenly rise to 103° or 104° , and the pulse to 120 or 130 beats in the minute. The head is hot and painful, and the patient says he feels very ill.

He complains of a feeling of dryness and burning in the throat and pain on swallowing, and there is now no difficulty in recognising the fact that he is in for a bad attack, and is suffering from the more serious form of the disease, which we have already described.

If there be any wound or abrasion of the skin during an attack of diphtheria it is apt to become covered with a pellicle of membrane similar to that which forms in the throat. Even in people not suffering from the disease, but who are exposed to an atmosphere charged with the diphtheritic poison, sores or abrasions will undergo this change, and it is said that in this way an attack sometimes commences. What it teaches us practically is this: that we should not apply blisters, or inflict even the most trivial wound, during the prevalence of an epidemic of diphtheria. Even the application of leeches should be avoided.

Diphtheria may cause death simply mechanically by suffocation, but the exhaustion occasioned by the intensity of the constitutional disturbance is usually an important factor. The duration of the disease may vary from forty-eight hours to fourteen days. When death takes place within a week from the first appearance of symptoms of illness, it is always preceded by the extension of the inflammation to the larynx. When death occurs as the consequence of the general disease, the fatal issue usually ensues during the second week of the disorder, unless, indeed, the patient has been greatly weakened by some previous illness.

During the progress of the case the kidneys not unfrequently become affected, and diphtheria may cause Bright's disease, just as scarlet fever does.

After recovery from an attack of diphtheria there is often paralysis of different parts of the body. As the paralysis is developed only gradually and slowly, it is seldom noticed until the second or third week from apparent recovery from the disease.

The soft palate is usually the first part affected, and difficulty is experienced in talking, swallowing, and expectorating. The voice becomes

nasal and the sounds run into one another, so that it is no easy matter to understand the patient. In eating or drinking the food is always going the "wrong way," that is, it falls into the larynx, and is forcibly ejected during a violent fit of coughing. Very frequently fluids, instead of being swallowed, run out through the nose. The patient is almost unable to expectorate; and should he get a cold on his chest his condition may become critical.

Sometimes the muscles of the eyes are affected and there is disturbance of vision. At first there is difficulty in reading fine print, the effort being attended with considerable discomfort and even pain. At a later stage the patient is found to squint, and he often sees everything double. After a time the paralysis may extend to the limbs and other parts of the body, so as quickly to reduce him to a condition of the most utter helplessness. The muscles of the neck may be involved, so that when the head falls backwards or forwards the patient is unable to lift it again without help. If the muscles of the trunk are considerably affected it becomes impossible for him to raise himself from the horizontal position, or to turn himself in bed from one side to the other, and when placed in a sitting posture he simply collapses. When the affection becomes so general as this, there is always a fear lest the paralysis should extend to the heart or to the muscles by which respiration is carried on. When the palate is the part affected, the food may enter the wind-pipe and cause sudden suffocation; or it may pass into the lungs and set up inflammation. As a rule, however, a good recovery is made from all these paralytic symptoms.

What should be done when diphtheria breaks out in a family? In the first place, send for the doctor. There is no disease in which the personal attendance of a medical man is more imperatively demanded. He will take the entire charge of the treatment, and you will not only have done the best for the sufferer, but will have relieved yourself from a fearful responsibility.

Unfortunately, however, the attendance of a medical man is not always procurable: and for the benefit of those who have to rely on their own unaided resources, we give a short sketch of the mode of treatment.

In the first place the patient should be at once sent to bed, for early rest in these cases is of the utmost importance. The room should, if possible, be large and airy, and the greatest attention must be paid to ventilation. At least one of the windows should be kept constantly open for an inch or two at the top, so as to avoid any chance of stuffiness.

It is a good plan to have plenty of carbolic acid and water placed in basins about the room. It may be used for receiving and disinfecting the discharges; and a little occasionally sprinkled on the floor will do much to keep the air sweet.

Means should be taken to isolate the patient; and people who are not actually in attendance should not be allowed in the room, both for their own sakes and for the sake of the sufferer.

It is a good plan to give the patient plenty of ice to suck, in pieces of such a size that they can be conveniently and comfortably held in the mouth. Ice is useful in allaying the heat and pain in the throat, and in checking that abundant secretion of mucus which is so annoying from the constant hawking which it occasions. Its beneficial effects are most marked when its use is commenced at the very onset of the attack, and it should be continued as constantly as possible until it has fairly declined.

During the whole of the illness the patient's strength should be carefully supported by the administration of strong beef tea, milk, raw eggs, and other nutritious diet.

The drug on which we place the greatest reliance is iron. It is, we believe, best given in the form of the solution of the perchloride of iron. The tincture of perchloride of iron is of the same strength and answers equally well, but it is made with spirit, and we may not always want to give alcohol. In the case of an adult, thirty minims should be given in an ounce of water every alternate hour, or half the quantity hourly. The dose for a child is ten drops every hour in a little water. These are large doses, but in diphtheria, as in erysipelas, iron, to do any good, must be given frequently and in considerable quantities. The taste is rough, and should it prove very objectionable, may be modified by the addition to each dose of twenty drops of glycerine.

We do not know exactly in what way the medicine acts. It may produce its beneficial effects either by coming in direct contact with the throat or by its general influence on the system. The solution of perchloride of iron does good when frequently painted over the back of the throat. Great pains must be taken to apply it very gently, or by increasing the inflammation it may do more harm than good.

In many instances the internal administration of the red iodide of mercury, in doses of $\frac{1}{60}$ grain, has been attended with the most favourable results. It should be given every three hours in a few grains of sugar of milk.

The question of the amount of stimulant that should be given is a very

delicate one. The mere fact of the patient suffering from diphtheria in itself affords no grounds for the administration of alcohol. The stimulant should be given because the general condition of the patient requires it, and not because he is suffering from any particular disease. In the slighter cases of diphtheria no stimulant at all is wanted ; whereas in the more severe forms, where the patient's strength is utterly worn out, nothing but the free administration of brandy will enable him to weather the storm. Do not be in too great a hurry to give wine or brandy, or you may find when it is too late that you have thrown away your best card. Remember, too, that the mere fact of your getting down so much brandy does not prove that it is taken into the system, for it may remain in the stomach unabsorbed, and might just as well, for all the good it does, be outside the body. Feel the pulse, and if you find your stimulant strengthens it you may hope that it is doing good. In severe cases, attended with great prostration, as much as four or five ounces of good brandy may be given in the twenty-four hours, even to a child.

In the majority of cases of diphtheria it is not necessary to use gargles, but should the breath become very offensive they may have to be resorted to. One of the most useful is made by adding half an ounce of the solution of chlorinated soda to half a pint of water.

We must now consider the treatment to be adopted for the different forms of diphtheritic paralysis. When the paralysis is limited to one part, as the eye or palate, no very active measures are required, for the symptoms usually disappear of themselves in a few weeks. If, however, the patient is still a little out of health, and feels pulled down by his late illness, he will derive benefit from a course of tonics, and especially from iron (Prs. 2, 3, and 4, and T. 15 or 65) and quinine (Pr. 9, and T. 63). He should have a good nourishing diet, and should pass most of his time in the open air.

When, however, the paralysis involves several distinct parts it assumes a more serious aspect. As in the former case, we give the patient plenty of nourishment and some iron and quinine, but we do not let him take much exercise, preferring to keep him quiet and free from excitement. When the paralysis is no longer progressing, we cautiously apply electricity to the parts, using either what is called an induced or a constant current. In some cases doses of from one to five doses of tincture of gelsemium, given hourly in a little water, have been found materially to assist the restoration to power. This drug is especially indicated when the eye is affected and there is double vision.

When the palate is involved to such an extent that the patient loses either entirely or in a great measure the power of swallowing, we may find it necessary to feed him for days and days together either by injections into the bowel, or by means of the stomach-pump. We do this for two reasons—firstly, because when an attempt is made to take food in the ordinary manner the smaller particles are apt to go the wrong way and pass into the lungs, and set up inflammation of those organs; and secondly, because such a small amount of nourishment is taken that the patient is in danger of dying of starvation.

Of late years, hypodermic injections of strychnia have been frequently used in the paralysis following diphtheria, and very favourable results have been obtained. The quantity injected is three drops of the British Pharmacopœia solution of strychnia, which is equivalent to one-tenth of a grain. The injection should be made into the muscles every second day, or even daily. This, of course, is a method of treatment which could be practised only by a medical man.

It must be distinctly understood that the remarks we have made concerning the treatment of diphtheria are for those only who are unable to obtain personal medical advice. There are many different methods of treating this disease; and if the plan adopted by the doctor in attendance is at variance with the directions we have laid down, it should be remembered that one who has had the opportunity of seeing and examining the patient is likely to prescribe better for him than one who has not.

Sometimes the amount of obstruction caused by the membrane in the throat is so great that the windpipe has to be opened to admit air and prevent the patient from dying of suffocation. The operation, which is technically known as "tracheotomy," was performed by Trousseau in more than two hundred cases, and of these a quarter recovered. An eminent authority thus describes an instance in which tracheotomy was performed on the person of a physician ill with diphtheria:—"There is not a shadow of doubt," he says, "on my mind that he would have been dead in two minutes had his larynx not been opened at the moment it was. I never saw anyone so manifestly brought back from the threshold of death. His complexion had the bluish pallor that precedes immediate dissolution. My hand was on his wrist. I felt his pulse failing under my finger, until at last it was imperceptible. His eyes closed, and his diaphragm was making those convulsive contractions which indicate that respiration is about to cease, when the knife entered the larynx, and air was drawn, by what really seemed the

last effort of the diaphragm, into the lungs. The natural hue of his face returned; his pulse was again perceptible; his eyes opened; consciousness was restored, and the patient was alive again. He finally recovered. Now, a thousand failures of the operation in saving life cannot, after seeing this case, prove to me that tracheotomy ought not to be performed when suffocation is imminent from the presence of lymph in the larynx or trachea; for here is a man whose life was invaluable to his family and most useful to society restored to health, who, but for the operation, would have been dead."

When the softer parts of the chest recede whilst a breath is being taken, or the patient looks ever so slightly blue or livid, it is to be regarded as an indication that there is some obstruction to the free entrance of air into the lungs, and the doctor, if not present, should be at once sent for.

At the conclusion of a case of diphtheria, whether it terminate favourably or unfavourably, the room in which the patient has slept should be thoroughly disinfected. The paper should be stripped from the wall and every particle burnt. The walls and ceilings should be repeatedly lime-washed. The floors and furniture should be treated with the Local Government solution mentioned in the article of cholera, great care being taken that it permeates every crack and chink of the flooring. The drains should be examined by the Sanitary Inspector and the closets should be thoroughly flushed out with the antiseptic solution. The windows should be left wide open day and night, if possible, so as to obtain a thorough current of fresh air. All sheets, underlinen, etc., should be soaked in the disinfectant solution before being washed, and clothing which cannot be so treated should be burnt. Unless these precautions are carried out the disease will undoubtedly attack those who have the misfortune to use the rooms in which the illness occurred.

DROPSY.—Dropsy is regarded by medical men rather as a symptom of disease than as a disease itself. It consists essentially in the accumulation of fluid, either beneath the skin or in one or more of the large cavities of the body. It is known by different names, according to the situation in which it is found. Thus, when the brain becomes distended with fluid, as it does sometimes in children, we call it "hydrocephalus," and the patient is said to have water on the brain, or to be "hydrocephalic." When the fluid accumulates in the membrane which

lines the chest or thorax and covers the surface of the lung, the condition is known as "hydrothorax"; and when it collects in the pericardium, or membrane of the heart, it is called "hydropericardium." Sometimes the liquid accumulates in the belly, and then we speak of it as "ascites." When the limbs and body are distinctly swollen from the accumulation of dropsical fluid beneath the skin, the patient is sometimes said to be suffering from "anasarca." By "general dropsy" is usually meant a combination of anasarca with dropsy of one or more of the large cavities to which we have referred.

Dropsy may be due to many different causes. Thus, it may arise from disease of the heart, or from disease of the liver, or from disease of the kidneys—more especially from the form of kidney disease which we have already described under the name of "Bright's." The way in which these complaints produce effusion of fluid is in all probability by increasing the pressure of blood in the vessels—the arteries, and veins, and smaller vessels called capillaries; so that its more fluid portion infiltrates or is squeezed through their walls. It is easily understood that if the kidneys are diseased they cannot throw off the water from the system, and the blood-vessels get too full. The same thing happens in disease of the heart, for that organ may be so weakened and may perform its functions so imperfectly as to be unable to push on the blood, and an obstruction with increased pressure is the result. In disease of the liver, dropsy usually begins in the form of ascites, or effusion into the belly, and the explanation of this is that the liver contracts and narrows the calibre of the blood-vessels, so as to increase the pressure of the blood and squeeze out the fluid.

The influence of obstruction to the circulation in producing dropsy is well seen in the case of the complaint known as "white leg," which is common in women soon after child-birth. The foot, leg, and thigh become enormously distended. The essence of the complaint is inflammation of the vein of the thigh, precluding or retarding the return of blood from the limb. Again, in pregnancy, the womb sometimes presses upon some of the large veins in the belly, obstructing the current of blood in them, and in this way giving rise to dropsy of the lower extremities. It is but a temporary condition, and soon disappears after the confinement. Sometimes effusion of fluid is so strictly localised as to be confined to one joint, as the knee or elbow, but then it is nearly always due to some injury to the part, as a blow or sprain, and is not the result of any constitutional disease.

It is quite conceivable that we may get dropsy without any increased

pressure in the blood-vessels, and this undoubtedly does sometimes occur. Thus, in cases of marked anæmia, the blood may become so thin that its fluid part filters through the blood-vessels independently of any unusual pressure, and in this way gives rise to dropsy. It is, we think, not generally known that very extensive dropsy may be dependent solely on the presence of anæmia. Many women suddenly become dropsical as the result of flooding, and this condition rapidly disappears when the quality of the blood improves. A sharp attack of diarrhœa has been known to give rise to a temporary dropsical effusion.

There is seldom any difficulty in recognising the presence of dropsy. The limbs are commonly increased in size: they are soft and inelastic, and when they are pressed upon with the finger a little pit or depression is left. Usually there is undue pallor and a peculiarly white glistening appearance of the skin; but in chronic cases, where the effusion of fluid is great, the skin often becomes smooth, shiny, and of a dull red or purple colour. In some situations—as over the shin-bone, for example—it gets livid or blackish, and may even be broken, so that sloughs form. The water of dropsy is liable to change its place in obedience to the force of gravity, so that when the patient is up and about the swelling usually first becomes visible in the feet and ankles. In the morning, after the horizontal position has been maintained for some hours, this probably disappears, but the neck and face become bloated and puffy. The feet towards evening usually swell more than the hands; and for a very obvious reason, for the hands receive the dropsical fluid from the arms alone, but the feet that which sinks down, not only from the legs and thighs, but from the head and trunk as well.

The principal symptoms attendant on dropsy are those of the disease to which it owes its origin, but the effusion may itself give rise to the most distressing consequences. Thus, a large accumulation of fluid in the abdomen often by its pressure impedes the action of the heart and lungs, causing painful shortness of the breath. The patient may, on this account, be unable to lie down, and the fatigue, sleeplessness, and exhaustion so caused may materially aggravate his sufferings. Other symptoms frequently associated with the different varieties of dropsy are palpitation, dryness of the skin, excessive thirst, vomiting, and constipation. The pain and inconvenience arising from swollen legs need only be mentioned.

We will now consider the treatment of dropsy. It may, perhaps, be

urged that it is unsound in principle to treat, or endeavour to treat, what is confessedly a mere symptom, instead of directing our attention to the disease on which it depends. This is quite true, but it must be remembered that in many cases the original disease is beyond the reach of our art; whilst in almost every case, even if only temporarily, we are able to relieve many of the most distressing symptoms by getting rid of some of the effusion.

In the majority of cases, we endeavour to promote the discharge from the body of the superabundant fluid by purging the patient, or by increasing the action of the skin or kidneys.

Bitartrate of potash often proves very useful from the copious watery stools it produces. It is especially serviceable in dropsy arising from Bright's disease, as it tends to prevent watery accumulation to a dangerous degree beneath the skin, or in the cavities containing the more important organs, as the heart and lungs. With the water, too, it draws off many of the effete and poisonous matters which in this disease are retained in the blood. Jalap may be used for the same purpose as the bitartrate of potash, and it is often convenient to administer them together. A powder, composed of twenty grains of compound powder of jalap, with ten grains of bitartrate of potash, forms an efficient combination (Pr. 98). This dose, which is intended for an adult, may be taken every alternate morning for a week. A somewhat milder remedy is hashra tea infused in a cup of boiling water and taken at bedtime. It is gentle in its action and causes no pain or griping. It should be borne in mind that free purging has always a tendency to reduce the strength, and care should be taken to see that it does not become excessive.

Resin of copaiba acts powerfully on the kidneys, and in the majority of cases proves of considerable value in the treatment of dropsy. In some instances it has been known to completely cure ascites, or dropsy of the belly. It is of the very greatest value in nearly all forms of dropsy resulting from Bright's disease or kidney mischief, and will often succeed admirably even when the heart is the organ at fault. The resin of copaiba may be made up into pills, each containing five grains, two of which should be given three times a day. Spirit of juniper has an action which is especially directed to increasing the flow of water from the kidneys, and is on this account valuable in many forms of dropsy. It is especially indicated in dropsy following scarlatina. It may be given either alone in water, in thirty-drop doses every four hours, or, as it is contained in both Hollands and gin,

it may be taken in that perhaps more agreeable and accessible form.

Another very reliable remedy is citrate of caffeine. Two grains (T. 33) should be dissolved in some effervescing water, such as Rosbach water, soda, or seltzer, and taken three times a day.

Tincture of squill, in doses of from fifteen to twenty drops in a little water every four hours, has been found useful in nearly all kinds of dropsies. It acts chiefly on the kidneys.

In many forms of dropsy, especially those dependent on heart disease, digitalis or foxglove is a most valuable remedy. Its administration is especially indicated in the following class of cases:—There is dropsy, which is often extensive; the breathing is short, especially at night, and is often so bad that the patient cannot lie down in bed, and has to take his rest sitting up in an arm-chair. The pulse is quick, feeble, fluttering, and irregular, and the urine is deficient in quantity. On measuring it, it may be found to amount to not more than half a pint in the twenty-four hours; it is high-coloured, and gives a copious deposit on cooling. Under these circumstances, digitalis usually gives speedy relief. It should be given in doses of half a drachm of the infusion of digitalis of the British Pharmacopœia twice a day. Any chemist will make the infusion, and it is essential that it should be quite freshly prepared. Digitalis is a powerful remedy, and it is advisable not to increase the dose we have indicated, or to give it more frequently than twice in the twenty-four hours, unless under the immediate direction of a medical man. The effects of this method of treatment are often very marked, and we can testify to the favourable results which frequently ensue. The pulse usually grows considerably stronger, more regular, and much slower, till in many cases all irregularity ceases, and it becomes natural both in frequency and rhythm. At the same time, the urine increases to one, two, four, or even eight pints a day; and in proportion to the increased flow the dropsy diminishes, until it finally disappears. In these cases it is necessary to give some stimulant, and gin and water or gin and seltzer, from its action on the kidneys, is best adapted for this purpose.

Arsenic is a useful remedy in many forms of dropsy, especially in dropsy of the hands, face, and feet, arising from disease of the heart. It does least good when the dropsy is confined to the belly, and depends on disease of the liver. It is especially indicated in the following class of cases:—There is much general debility, with rapid emaciation and anxious depression; constriction and oppression of the

chest, and a sensation of suffocation, are experienced on attempting to lie down; the skin is dry and pale or burning and itching, and sometimes it peels off in large flakes; the tongue is red and parched, sometimes with excessive burning thirst; the pulse feeble and irregular, and the extremities cold. Arsenic often increases the flow of urine to an astonishing extent, after which the dropsy disappears. It may be administered in the form of the arsenic mixture (Pr. 40) or tabloids (T. 7). Its action is usually prompt, and if it does no good in a few days it will be useless to continue its administration.

Hellebore often proves valuable in cases of water on the brain, and when there is effusion of fluid into the chest. It may be administered in doses of from ten to fifteen drops every four hours.

Apocynum cannabinum, a small American plant, has been highly recommended in the treatment of dropsy, and its administration is said to have been followed by favourable results. The precise indications for its employment are at present not thoroughly understood, but it has been known to succeed where other remedies have been tried in vain. It should be given in the form of a tincture, prepared from the fresh root, the dose being five minims three times a day, or oftener.

In some cases of dropsy benefit is experienced from the Turkish bath, but this method of treatment should be adopted with caution. It is indicated in dropsy arising from kidney disease, when there is but little action of the skin; but it should not be employed when there is heart disease.

There is a drug, known as *Jaborandi*, which has the power of producing profuse perspiration. A single two tea-spoonful dose of the tincture should be given, once or twice a week, in water. The patient should be in bed between the blankets, which should have been previously warmed by a hot water-bottle or warming-pan. The perspiration usually commences in about ten minutes, and may last an hour or more. A single dose often reduces the amount of dropsy in a manner which is little less than marvellous. The only objection is, that it often makes the patient expectorate freely. The saliva should not be swallowed or it may cause vomiting. The tincture of jaborandi is obtainable from almost any chemist. It may be taken without the slightest hesitation, for it never causes more than a temporary inconvenience. When the sweating is over, the skin should be quickly rubbed dry, and the damp blankets exchanged for warm ones. The active principle of jaborandi is pilocarpine, and a very small dose of this induces profuse perspiration. It may be given either by mouth or injected under the skin. It is

put up in tabloids containing one-third of a grain and one of these suffices for a dose. The patient should be in bed when it is given, and everything should be done to promote sweating. It is undoubtedly a most valuable remedy.

In some cases where the dropsical effusion is very great the fluid may have to be let out by mechanical means.

Dropsical subjects are generally benefited by removal to a dry and moderately warm atmosphere. A damp climate or soil usually proves particularly unfavourable. In chronic cases every effort should be made to support the strength. In all cases the attendance of a medical man is necessary.

DYSENTERY.—A couple of hundred years ago dysentery raged like a plague in London; nowadays a physician may pass through a long hospital career without having half a dozen cases under his charge, save those which have been imported from abroad. In most tropical regions, at certain seasons of the year, it is very prevalent and destructive; but it is in fleets and armies, and more especially among troops on active service, that it most frequently displays its terrible power. In all ages armies and garrisons have been peculiarly liable to suffer from it, and the records of campaigns and military marches are full of accounts of its devastating ravages. It is often said that there is no disease which is so crippling to an army in the field as dysentery. It is the most fatal of all their diseases, and is often spoken of as “the scourge of armies.”

What are the causes of this frightful malady? One of the commonest exciting causes is cold, especially when combined with moisture. It is of frequent occurrence amongst people who are exposed to the cold dampness of night after having been heated during the day. It is very common among the seamen serving on the rivers in the aguish districts in China. We are told that the men, when they lie down on the deck to sleep, pull up their frocks and coarse under-flannel jackets, so as to expose the abdomen. When the cool night wind sets in, the exposed skin of the sleepers, from being bathed in perspiration, becomes dry and finally chilled, and in a very short time they awake to find themselves suffering from the early symptoms of an attack of dysentery.

Another cause is impure water. For example, nearly every person, native or European, who visits Calcutta, suffers from some kind of bowel

complaint. The seafaring men, who obtain their supply of drinking water by buckets let down over the sides of their ships, are said to be the greatest sufferers. We are not surprised to hear this when we learn that opposite the town the water is frightfully impure, and that it receives every day some 40 tons of excreta, besides a multitude of dead cattle, and about 15,000 corpses yearly.

Substances which act as direct irritants to the bowels may act as exciting causes. All kinds of indigestible foods are credited with this power, as are also acid and imperfectly fermented alcoholic drinks, such as cider, weak wines, and malt liquors.

By some authorities it is considered that dysentery is due to the entrance into the system of a marsh poison similar to that which causes ague. They urge in favour of this view that although the ordinarily accepted causes are in constant operation in this country, we rarely suffer from the disease. They believe that the disappearance, both of ague and dysentery, from the metropolis is the result of the improvement in our sanitary conditions.

Dysentery attacks indiscriminately persons of both sexes and all ages, and if one class of individuals is affected more than another it is probably owing to their greater exposure to the cause of the disease. It is more prevalent in summer and autumn than in winter, and in hot than in temperate climates. It is frequently found in those countries in which ague is prevalent; and strangers are more likely to be attacked than natives.

Dysentery is not contagious, or at all events its contagiousness is very slight. When once established, it is propagated by the effluvia from the evacuations of those affected. Sometimes it occurs as an epidemic, but more frequently it is confined within small and often very accurately defined limits.

Several different varieties of dysentery are spoken of, but they in reality pass by such insensible gradations the one into the other, that it will be sufficient for our purpose to describe an ordinary simple acute case.

The patient, in all probability, gets chilled by careless exposure to the cold night air in an aguish district. The chill is succeeded by slight heat of the skin, loss of appetite, and a feeling of nausea. These are followed by griping pains in the belly, irregular in their position and periods of return, but attended with discharges from the bowels, by which they are partially relieved. The action of the bowels is accompanied by most distressing straining, which quickly becomes one of the prominent

features of the case. From the first the stools are very offensive, the smell, which has been described as "the most offensive of all organic effluvia," being characteristic of the disease now under consideration. After a time the calls to stool become more urgent and frequent; the patient is hardly in bed ere he desires to rise again, each time convinced that he is about to pass something which will relieve him. At last he can hardly be induced to leave the stool: he remains on it, and strains involuntarily. After the first few evacuations, which may have the appearance of ordinary motion, the stools are very small, and consist of transparent or whitish mucus, or of mucus mixed with blood, and sometimes even of almost pure blood. With these are little shreds or patches of membrane. As the disease progresses, the patient becomes irritable and depressed, and the countenance indicates suffering and despondency. If no improvement takes place, the stools become of a brownish colour and very copious, causing the most terrible exhaustion. The distressing straining and griping cease, and the patient, misled by the absence of pain, often thinks that he is on the high road to recovery. By-and-by his mind begins to wander, and, as if in some degree to compensate for past sufferings, his delirium takes pleasing forms, and he dies exhausted, without more pain. In more favourable cases, treatment steps in and averts the fatal termination, or the disease takes a favourable turn, and the patient recovers.

Sometimes, however, the patient neither dies nor completely recovers, for the disease becomes chronic. The discharges still maintain somewhat of their offensive odour, are for the most part fluid, and mixed with blood and slime. Sometimes they are pale and frothy, and are voided with considerable force. The general health is poor, night sweats are frequent, the hair drops off, boils are common on all parts of the body, and the patient ages rapidly.

Dysentery is very likely to be followed by abscess of the liver, which may give rise to months of suffering.

There is seldom any difficulty in distinguishing dysentery from ordinary diarrhœa. The excessive griping and straining, the presence of blood and slime in the stools, and, above all, their peculiar odour, serve as distinctive characters.

Fortunately, dysentery is a disease for which we have a remedy, which is almost a specific, and that remedy is ipecacuanha in large doses. The earlier the patient is submitted to treatment the more likely are we to succeed in our efforts to check the progress of the disease. In tropical climates, more especially, it is impossible to over-estimate the importance

of prompt treatment. The patient should be at once put to bed, and brought under the influence of the drug. From twenty-five to thirty or even sixty grains of powdered ipecacuanha should be at once administered in as little fluid as possible. It may be thought that so large a dose would produce vomiting, but if the patient keeps perfectly quiet, and takes neither food nor drink of any kind for about three hours, the medicine seldom causes any inconvenience. Some people precede the ipecacuanha by a dose of thirty drops of laudanum, to prepare the stomach, as they say, for its reception; but this is quite unnecessary, and involves the loss of valuable time. Should the ipecacuanha, however, be rejected in spite of all precautions, it must be given in the form of an injection. The effects of the medicine in suitable cases are almost instantaneous, the motions even in the worst cases becoming natural in frequency and character. Very frequently, ninety grains of the ipecacuanha will cut short at once severe attacks of dysentery, not only restraining the discharge, but immediately freeing the patient from pain, and removing the straining and griping. After a dose of sixty or ninety grains, an interval of ten or twelve hours should be allowed to elapse before repeating it, and should the bowels in the meantime have remained quiet, even the second dose may be unnecessary. When only twenty or thirty grains have been given, the dose may be repeated in about eight hours, the precautions respecting perfect quiet and abstinence from food and drink being observed as before. After taking the medicine, the patient often falls asleep, and awakes refreshed, and in fact quite another man. As a matter of precaution, smaller doses of the ipecacuanha—say ten, five, or three grains—should be given daily for some days. No other treatment is, as a rule, necessary: but a large mustard poultice applied over the abdomen often proves grateful to the patient. During the acute attack no solid food should be given, but the patient's strength should be supported by milk and similar unirritating diet. The disposition to relapse, which is so common in acute dysentery, is seldom observed after this method of treatment, a point of no small importance.

The treatment should always be commenced with ipecacuanha, but in some epidemics it is less successful than in others, and it is consequently an advantage to have other methods of treating at our disposal. Mercury given frequently and in small doses often proves successful. A teaspoonful of the mixture (Pr. 48), given every two or three hours, according to the severity of the case, rarely fails to free the stools from blood and slime, although a diarrhoea of a different character may

continue for a little while longer, and perhaps require other remedies for its removal.

When the motions contain much blood, hazeline may be given hourly in tea-spoonful doses, with the view of arresting the hæmorrhage, or Pr. 45 in table-spoonful doses every hour may be employed.

When the acute symptoms have subsided an attempt should be made to improve the strength by tonic treatment. Begin with five-grain doses of quinine three times a day (T. 64), and follow this up with a course of iron (T. 38, 15, and 65). In the convalescent stage phosphorus—the elixoid—or the hypophosphites—Fellows' syrup—will be found useful. Burroughs' beef and iron wine with quinine, the Kepler extract and the Kepler solution with cod-liver oil may be given in turn.

In chronic dysentery both ipecacuanha and mercury may be used with almost as much success as in the acute form. The precautions we have enjoined after taking the ipecacuanha should be strictly observed. Chronic dysentery, however, is an obstinate disease, and we cannot have too many strings to our bow, so we will consider what other drugs will do for us. Alum often proves of service, and acetate of lead in five-grain doses every four hours is a good remedy (Pr. 30).

The solution of per-nitrate of iron does admirably in the case of men returning to this country from tropical regions, more especially when they are suffering from anæmia, as the result of loss of blood and the depraving influence of malaria. It should be given in thirty-drop doses three times a day in a wineglassful of water. Under the influence of this remedy the whole system often rallies wonderfully, colour returns to the blanched cheek, the stools become more natural and less frequent, the appetite improves, and digestion is more perfectly performed.

Sometimes an injection of a pint of water in which ten or fifteen grains of sulphate of copper—our ordinary “blue-stone” or “blue vitriol”—have been dissolved, will answer admirably.

It is most important that the patient should get a change of air, and if he is residing in a malarious district he should be at once removed to the sea coast, or should be recommended, if it be possible, to take a sea voyage.

Before leaving the subject of dysentery, we must point out the absolute necessity of taking adequate sanitary measures. The regulations laid down when speaking of cholera should be followed with the greatest attention.

DYSPEPSIA.—(*See* INDIGESTION.)

ECSTASY.—Though closely allied to catalepsy, ecstasy differs from it in several important respects. One of the main points of difference is that in ecstasy the vision or train of thought that has been going on during the seizure is remembered, whilst in catalepsy there is complete oblivion. It often happens that the two diseases alternate or co-exist.

In ecstasy the limbs are motionless, but not rigid. The eyes are open, the pupils fixed, the livid lips parted in smiles, and the arms extended to embrace the beloved vision. The body is erect and raised to its utmost height, or else is extended at full length in recumbent posture. A peculiar radiant smile illuminates the countenance, and the whole aspect and attitude is that of intense mental exaltation. Sometimes the patient is silent, the mind being apparently absorbed in meditation, or in the contemplation of some beatific vision. Sometimes there is mystical speaking, prophesying, or singing, or the lips may be moved without any sound escaping. Various attitudes are assumed in consonance with the ideas passing through the ecstatic's mind. Spots of blood sometimes appear on the hands and other parts of the body, and are said to represent the wounds of the nails in the hands and feet of Jesus, or the thrust of the spear in His side. Usually there is complete insensibility to external impressions.

Ecstasy is often associated with religious monomania. It was formerly quite common among the inmates of convents, and is now not unfrequently met with at camp-meetings and other gatherings of a similar nature. Many truly devout persons are ecstatics, the reason being that since the diffusion of Christianity, religion has exerted a more powerful influence upon the mind and emotion than anything else.

Ecstasy is not a common complaint, but still many cases have been recorded even during the last few years. One of the best known is that of Louise Lateau, who was born at Bois de Haine, a small village in Belgium, in the year 1850. Even as a child she exhibited symptoms of nervous derangement. We are told that she loved solitude and silence, and spent most of her time in meditation and prayer. She was subject to paroxysms of ecstasy, during which she spoke on the subjects of charity, poverty, and the priesthood. She fancied that she saw St. Ursula, St. Roch, St. Theresa, and the Holy Virgin. Bleeding, or "stigmatisation," as it is called, appeared soon after the onset of these seizures. One Friday she bled from the left side of her chest; on the following Friday the flow was renewed and, in addition, blood escaped from the backs of

both feet; whilst on the third Friday not only did she bleed from the side and feet, but also from the backs and palms of both hands. This continued for a long time, and finally other bleeding points were established between the shoulders and on the forehead. The evidence seemed to show that there was *bonâ fide* bleeding, and that it was not the result of a wound made artificially. In addition to these phenomena, Louise declared that she never slept, that she had had nothing to eat or drink for four years. This was undoubtedly untrue. On being closely interrogated she admitted that, though she did not sleep, she had short periods of forgetfulness at nights—a distinction without a difference. One of the doctors who investigated the case, on suddenly opening a cupboard in her room, found that it contained fruit and bread. It was also shown that her chamber communicated directly with a yard at the back of the house, so that it was perfectly possible for her to have slept, eaten, etc., to her heart's content without anyone being a bit the wiser. Quite a number of books have been written about this interesting young lady, the theologians endeavouring to prove that she was the subject of miraculous intervention, and the doctors regarding her simply in the light of a curious case of ecstasy. We have very little doubt that bromide of potassium would soon have put a stop to the phenomena. Systematic watching would have been attended with the same result as in the case of the Welsh fasting-girl, or with a sudden restoration of appetite.

Sometimes ecstasy occurs as an epidemic; the strange spasmodic epidemics of the Middle Ages were undoubtedly of this nature. A few years ago an epidemic of ecstasy or emotional exhibitions occurred in several parish churches in one of the most northerly of the Shetland Islands. It was brought to an abrupt conclusion by a rough fellow of a kirk officer, who carried out a troublesome patient and “tossed her into a wet ditch.” From that time forth no more cases occurred. This is not the only instance in which epidemics of this nature have been arrested by arguments addressed to the fears of the subjects. Making preparations to cauterise the region of the spine with a red-hot iron has often a most beneficial effect.

A great deal can be done in the way of treatment, by giving as little notoriety to ecstasies as possible. They glory in the idea that they are of sufficient importance to excite attention and discussion, and they are accordingly stimulated to yield to their attacks, so long as they find that an air of mystery is attached to them. Removal from all associations calculated to continue the exciting and morbid train of

thought which has developed the disease is of importance. The drug from which most benefit is usually derived is bromide of potassium. The mixture (Pr. 31) should be given in three table-spoonful doses three times a day. Should this fail, half a tea-spoonful of the ammoniated tincture of valerian should be added to each dose. A five-grain compound assafoetida pill given twice or three times a day often does good. A useful prescription is a tea-spoonful of fetid spirit of ammonia, a table-spoonful of lime-water, and a table-spoonful of peppermint-water every four hours. The systematic use of galvanism in conjunction with these remedies is often of service.

ENTERIC FEVER.—(See FEVERS.)

ENLARGED GLANDS.—Enlarged glands in the neck, associated with a condition of more or less marked debility, are of frequent occurrence amongst the children of the London poor. When we consider their mode of life, either in the metropolis or in any of our large manufacturing towns, we can hardly wonder that such is the case. They live in an atmosphere stagnant and contaminated in a thousand ways, and in little dark ill-ventilated rooms in narrow streets. They are badly clothed, and insufficiently protected from the injurious effects of cold and wet. They are ill-fed, their diet being frequently, and indeed generally, of a kind quite unsuited to their growing years.

The glands often begin to enlarge during the condition of debility left by some illness, such as whooping-cough or scarlet-fever. Often enough the skin breaks over them, giving rise to the formation of a number of little abscesses, which may go on discharging week after week and month after month, and are very difficult to heal.

In these cases much may be done in the way of treatment.

The diet must be specially attended to, none but the lightest and most nourishing food being given. It is a great mistake to overload the stomach, for it must be remembered that the little patient's digestive powers are usually none of the best.

The use of stimulants, whether wine or beer, should be very sparing, and the milder and weaker should be preferred to the heavier and stronger kinds of malt liquor.

The patient should be made to take plenty of exercise in the open air, not however carried to the point of fatigue; and it would be very

desirable, if funds could be obtained for the purpose, for him to have a change of air from time to time, alternating a sea with an inland climate.

The clothing should be warm, and should cover the whole of the body, no part being left unprotected.

Bathing, whether in sea or river, with the habitual use of the tepid or cold sponge bath, and friction of the skin with horsehair gloves or a rough towel, should be frequently practised.

The bowels must be kept regular, but only the mildest aperients should be administered, anything like active purgation being scrupulously avoided.

The best medicine for this condition is sulphide of calcium. One of the little sulphide of calcium tabloids (T. 74) should be taken every four hours for a couple of weeks, and then less frequently for some time longer. They at once arrest the formation of fresh lumps in the neck, and abscesses if present usually dry up and disperse, the wounds quickly healing. Even in those very bad cases where there is disease of the bones of the fingers or wrists, this mode of treatment will do a great deal of good.

After the second or third week some form of tonic may be administered in conjunction with the sulphide of calcium. Cod-liver oil, quinine, and iron—all do good in this condition. The dose of cod-liver oil should not exceed a tea-spoonful to begin with, and it may be taken alone or in combination with steel wine, or an equal quantity of the syrup of iodide of iron. Often enough the Kepler extract or Parrish's chemical food answers as well as anything. In prolonged cases the syrup of hypophosphite of lime taken in twenty-drop doses night and morning does good. But the treatment on which most reliance is to be placed in these cases is the sulphide of calcium.

EPILEPSY—FITS—FALLING SICKNESS.—This complaint has been known from the earliest times. The ancients superstitiously ascribed it to the malice of demons, or to the anger of their offended deities. If a person had a fit in the forum, it was considered an ill omen, and the meeting was at once dissolved, all public business being suspended for that day, and from this circumstance the disease was called *morbus comitialis*.

Nothing can be more startling than the onset of an epileptic seizure. It comes on suddenly, often when least expected by the sufferer or those

about him. In a moment, with a loud cry or groan, he falls struggling, foaming, and insensible upon the earth. He strains and struggles violently; his breathing is embarrassed or suspended; his face, which at the very instant of the fall had assumed a corpse-like pallor, soon becomes turgid and livid: he foams at the mouth; a choking sensation is heard in the windpipe, and for a moment he appears to be on the point of death. In a little while these alarming symptoms abate, and at length cease, leaving the patient heavy, exhausted, and stupid. After an interval this, too, passes away, and he to all appearance is perfectly well.

As we have said, the attack occurs suddenly. Sometimes there is a distinct warning, but even then it is of the shortest possible duration. The symptoms constituting the warning, when it does occur, are widely different in character and intensity. One patient had always before an attack the idea of a man shooting pigeons. He said distinctly that he saw nothing of the kind, but simply the idea came into his head, and then he knew that he was on the point of having a fit. In another case, the patient stated that when a fit was approaching he fancied he saw a little old woman in a red cloak advance towards him, and strike him a blow on the head, when he at once lost all recollection, and fell down. A gentleman who was epileptic said that just before a fit he always heard "an infernal noise something like the outside of a booth at a country fair," whilst another had a vision of "a hideous donkey." Sometimes there is a distinct "aura," as it is called. The patient experiences a sensation of blowing, or something like it, which commences in the extremities and passes upwards to the head, insensibility ensuing when it reaches that point. The aura varies somewhat in character in different individuals. In one it is a distinct pain in the limbs, which runs up towards the head; in another there are twitching movements, and the legs are drawn up, or the arm becomes contracted; whilst in a third there is a vague uneasiness about the pit of the stomach, which seems to pass up through the chest.

One very peculiar circumstance about the aura is the facility with which it may be removed and the attack averted. When it consists of pain, it may be stopped by rubbing, or by the pressure of the hand, or by a piece of string or tape drawn tightly round the affected part. When there are contractions, they may be removed by getting someone to draw the affected limbs out straight. When it assumes the form of uneasiness in the stomach, it is advisable to take a little sal volatile, or spirits of chloroform, or spirits of ether, or some similar

aromatic draught. Suddenly dashing cold water in the face, or pressing the thumb forcibly backwards, will often succeed in averting the aura better than anything. The duration of the aura is always short, never if left to itself exceeding a few minutes. Sometimes, however, if stopped in the manner we have indicated, it may keep coming and going for hours, being arrested each time by appropriate measures. Some people, although they have no distinct warning, are dull, heavy, and depressed in spirits before each attack, so that their friends often guess what is going to happen. Very often this dulness and heaviness is removed by an attack, so that it seems almost to have done the patient good. Many people are unusually vivacious before a fit, and then when it is over they suffer from the most horrible depression for many days. Such are some of the different ways in which an attack may give notice of its approach. In some people there is absolutely no warning of any kind; in others it occurs with such regularity that the patient is enabled to move from a position of danger.

As we have said, at the commencement of an attack the patient gives a cry. This cry, which we should mention is often absent, is sometimes a groaning sound, seemingly squeezed out of the chest, but more frequently it is a piercing and terrifying scream. Women have been thrown into hysterics on hearing it, and it is said to have caused pregnant women to miscarry. Even the lower animals appear to be alarmed by it, and we are told that "a parrot, himself no mean performer in discords, dropped from his perch seemingly frightened to death by the appalling sound."

Usually at the outset of an attack the spasm twists the head round so that the patient seems to be trying to look over his shoulder. The limbs are rigidly contracted, the hands firmly clenched, the thumbs bent towards the palms, the toes curved downwards, and the feet arched. When the convulsive struggles begin the face becomes frightfully distorted, the brows are knit, the eyes quiver and roll about, or are fixed and staring, or they may be turned up, the whites only being visible; the mouth is drawn on one side, the tongue is thrust out between the teeth, and often severely bitten, so that the foam that collects around the lips is tinged with blood. The arms and legs are thrown about, striking the body, or bruising themselves against the floor or furniture. When the struggle has reached its crisis, the convulsions subside, and the sufferer looks at those around him with a bewildered, stupid, or sad expression, and perhaps essays to speak. He has a jaded, exhausted look, and seems tired and disposed to sleep. When the

convulsive paroxysm is over the after-stage of stupor sets in. The patient after awhile awakes, and is often confused and incoherent for a time; by degrees, however, he resumes his ordinary appearance and condition, but he remembers nothing of what passed during the fit. Vomiting often follows the attack, and with some people it is a constant sequence. Large quantities of urine are passed in many instances.

In many cases the symptoms are much milder than we have described. There may be no convulsion at all, nothing but a momentary loss of consciousness. The patient may be in the midst of talking, when suddenly a blank occurs which may last three or four minutes. There is a fixed, absent gaze, a totter perhaps, a look of confusion, and that is all. Consciousness returns, the patient goes on talking, or resumes his work where he left off, and is not always aware of what has happened. These absences or blanks may occur several or many times a day, perhaps for years.

These slight attacks are called by the French *petit mal*, while the severer form, previously described, is named *grand mal*, and these names have passed into general use. The slighter attack is sometimes spoken of as epileptic vertigo, to distinguish it from the ordinary epileptic fit. The best proof that these apparently dissimilar affections are in reality one and the same is afforded by the fact that they may both occur in the same individual. Sometimes a man will for a long time be affected with epileptic vertigo, and will then suddenly become the subject of ordinary epileptic fits. The two forms may intermingle, the milder happening sometimes, and sometimes the more severe. Between these two extremes there are many links of gradation. Sometimes the patient does not fall, but there is a momentary loss of consciousness, accompanied by slight spasm. Sometimes the sufferer sinks or slides down quietly and without any noise, is simply pale, is not convulsed at all, but is quite insensible. It will readily be imagined, from what we have said, that it is no easy matter to speak very definitely as to the duration of epileptic seizures. Sometimes the attack is slight and does not occupy more than a moment of time; at others it is more severe, and may last two or three minutes. An epileptic fit lasting more than five minutes is a rarity. It may seem to you to be much longer, but if you take out your watch and time it you will find that it is not. When an attack is said to last an hour or more it probably consists of a series of fits separated by incomplete intermissions.

Next, as to the frequency of the fits. Many people have distinct

bouts of fits—that is, they have two or three in a day, and then go a week or two without having any more. It is rare to find that there is any accurate periodicity in epilepsy, but you may often notice that the recurrence of the attacks has some kind of relation to time as marked by its natural division into days or weeks. It is not meant that the attack occurs exactly to the day—that is very rare—but rather that the fits occur about once a fortnight, or once a month, or whatever it may be. Most people who are subject to epilepsy have an attack oftener than once a month. The actual number of attacks in the year varies very much in different cases—there may be two or there may be two hundred. A high rate of frequency is not determined by an enfeebled state of health, for, on the contrary, it often happens that those whose general physical condition is excellent have a great many fits, whilst those who are weak and poorly have them at longer intervals.

Between the attacks the patient may be perfectly well, but such is not often the case. Very commonly the memory is bad, the patient forgets his engagements, and cannot even remember where he dined yesterday. Lowness of spirits is of frequent occurrence, and this may continue for a long time, and finally run on into a state bordering on imbecility. Sometimes the patient suffers from headache and giddiness, or from noises in the head, or perhaps he sees specks floating before his eyes. Epileptics usually have but little power of resisting cold, their circulation is feeble, and they have cold, damp, frog-like hands. The face often wears a peculiar expression, which is difficult to describe. Very often there is a curious immobility of the countenance, and a strange staring appearance about the eyes.

Epilepsy is not hereditary, or, if at all, but slightly so. It occurs with equal frequency in men and women. The first attack in the majority of cases makes its appearance between the ages of thirteen and seventeen. Sometimes the first attack occurs about the time the second teeth are cut. Often enough it is not repeated, and probably is then rather of the nature of a convulsion than of a true epileptic seizure. In young people fits are sometimes induced by a sudden fright. A child, for instance, breaks something, and is greatly alarmed at the thought of a scolding. In one case, a little girl slipped from the top of a large stone staircase to the bottom; she was apparently unhurt, and was congratulated on her escape; but a few days after epilepsy set in, and was to her a source of life-long misery. It is said that long-continued anxiety may be the cause of epilepsy, but it is not a common cause. Sometimes

epilepsy is brought on by seeing another person in a fit. Not only will a patient who has already suffered such attacks often fall into one upon seeing another so affected, but people will even sometimes do so who have never before shown any symptoms of it. Such instances, however, are rare, and practically there is not the slightest danger in attending a person with fits.

Just as we know very little about the cause of epilepsy as a whole, so we know very little about what brings on each individual attack. They very often come on at night, and at the commencement often occur solely at night. It has been noticed that when the fits are growing less frequent in their occurrence they come on chiefly or only at night, so that this must be regarded as a favourable sign.

There is no disease which is more frequently feigned than epilepsy. Many people think that nothing can be easier than to throw your arms and legs about and pretend to have a fit. Soldiers and sailors sometimes endeavour by this means to obtain their discharge from the service, and in France it is often employed with the view of avoiding the conscription. Feigned epilepsy is not uncommon in the street, the performer hoping to excite compassion and obtain money from the bystanders.

It is, of course, very important to distinguish the sham from the real disease. This is often rendered difficult from the fact of the impostor being unwilling to perform in the presence of anyone at all likely to detect the fraud. Pretended epileptics sometimes get admitted into our hospitals, and then they take care to have their fits just before the hour of the visit, or directly the physician has gone his rounds. You cannot assert positively that a patient is not really suffering from epilepsy, if you have never seen him in a fit, and he knows this perfectly well. But still you may find out a great deal by asking him questions, by, in fact, a system of cross-examination. The real sufferer does not mind a bit how often you ask him about his complaint, he is only too glad to tell you, and hopes you will be able to do something for him; but the impostor does not like it at all, and says as little as possible, being always afraid of committing himself. A man who is telling you the truth gives the same account time after time, but not so one who has to rely on his powers of imagination. He tells you one thing to-day, and his memory being short, another to-morrow. Moreover, he will tell different people different stories, and a comparison of notes often serves to detect the fraud. By putting leading questions to an impostor, you can often get him to make the most astonishing statements. For instance, you say to him, "Now, during a fit, do you see everything of a sky-blue

colour?" and he, thinking this is a symptom of the disease, promptly answers, "Yes;" whilst the true epileptic would regard you with astonishment, and reply in the negative. Then there is another point that is worth attending to. The impostor naturally chooses for his exhibitions places which are most suited for his purpose, as a crowded street, the promenade, and so on. The true epileptic does not care much for walking in the streets, especially about the time of an expected paroxysm, and when he does take the air, prefers some retired spot where, should a fit come on, there will be less chance of his being observed. Again, the real epileptic often gets seriously injured by his falls, and his face and body are covered with marks and scars; but the impostor generally selects some soft spot where he is not likely to sustain much injury by tumbling down. He takes good care, too, not to fall in the fire, or with his head on the stones.

When one has the opportunity of seeing a fit, the difficulties are not so great, although even then the problem is not always an easy one to solve. In the first place, in epilepsy the muscular power is very great, so that it requires three or four people to hold the patient down; the impostor can, of course, command no more than his natural strength. In epilepsy the fits are seldom both long and violent, whilst the impostor generally falls into the error of supposing that the longer he can keep it up, and the more violent he is, the better. The result is that he very much overdoes it. In epilepsy the eyes are partly opened, and the eyeballs are visibly rolling and distorted. In feigned epilepsy the performer usually prefers to close his eyes, but sometimes he cannot resist the temptation to open them for a moment to see what success is attending his efforts, and to watch the effect on the bystanders. In epilepsy the pupils are very large, and are insensitive to light: but in the feigned disease they are, of course, perfectly natural in size. If you pull up the eyelid and hold a candle just in front of the eye, you will find in the feigned disease that it is perfectly sensitive. The pupils contract, and the eyes of the malingerer blink in a manner that gives unmistakable evidence that he is not insensible. In epilepsy the pulse is often irregular, but this is beyond the power of the actor's art. Then, again, in a real fit the skin is usually pale and cold, but the impostor gets hot and red with his exertions, and perspires freely. The true epileptic often bites his tongue severely, but this is rather painful, and your impostor generally finds it advisable to omit this symptom. Foaming at the mouth is no criterion, for a piece of soap placed between the cheek and gums will furnish any amount of foam. In epilepsy the patient is of course

quite insensible, and feels no pain. A very popular mode of detecting a shammer is founded on this fact. A little hot sealing-wax dropped upon the hand or leg of a person who is not insensible causes an involuntary start, whilst a man who was really in a fit would no more feel it than if he was dead. A very good way of detecting an impostor is to propose gravely in his hearing to pour boiling water on his legs, and then actually to pour cold water on them. A favourite plan with police-constables and others who see a good deal of the worst side of life, is to press their thumb-nail under that of the supposed impostor. This, if done suddenly, gives rise to the most exquisite pain, and few people can bear it without an exclamation. It is a test that can be applied without any trouble and without inflicting the slightest injury on the sufferer or performer, as the case may be. We do not recommend the method, but still we must admit that its employment is perfectly justifiable when we suspect that a person is trying to deceive us.

A very ingenious plan was adopted with a soldier who was pretending to have a fit. In the midst of his convulsions he was laid on the upper of two tables placed one on top of the other. He was so afraid of falling off that instantly his movements ceased. In another instance some fine Scotch snuff was blown up the nostrils with a quill. In a moment the man was sneezing violently and the imposture was detected. In true epilepsy no amount of snuff would induce sneezing during a fit. We are told that there was once a beggar in Paris who often fell into epileptic fits in the streets; one day some compassionate spectators, fearing that he might injure himself in his struggles, got a truss of straw, and placed him on it; but when he was in the height of his paroxysm, and performing remarkably well, they set fire to the straw, and presently he took to his heels.

Epilepsy has sometimes to be distinguished from hysteria. An hysterical fit is usually preceded by sobbing, crying, laughing, and gesticulation, and does not come on so suddenly as epilepsy. A young lady in hysterics seldom falls down suddenly as if she were shot, but takes care to slide down gracefully, usually in a soft place, or where there is somebody near to catch her or support and comfort her. There may be a shriek, but it is repeated over and over again, and is a very different thing from the epileptic cry. Then in the attack there is not that hideous distortion of the features, neither is there the meaningless eye, nor the dilated pupil, nor the bitten tongue. In epilepsy insensibility is profound, but in hysterics the young lady knows

perfectly well everything that is going on, as you may find to your cost if you happen to say anything uncomplimentary about her. After the attack there may be a good deal of exhaustion, but there is not that deep sleep that one gets after epilepsy.

A fainting fit is sometimes mistaken for an attack of epilepsy. As a rule, there is little difficulty in distinguishing between them. In epilepsy the heart beats well, and the pulse can be felt at the wrist, whilst in a faint the patient is for the moment almost pulseless. It is sometimes no easy matter to distinguish between a faint and an attack of *petit mal*. It must be remembered that people do not faint without any cause, although often enough that cause is very trivial. It may be simply the heat of the room, or long abstinence from food, but there is always some reason. An attack of *petit mal*, on the contrary, comes on momentarily, and without, so far as you can tell, any exciting cause. If anyone apparently in good health is sitting quietly in a room not too hot, and, without receiving bad news or anything of the kind, suddenly becomes insensible, it is probably an attack of epilepsy and not a simple faint. If, on the other hand, the room is hot and close, the patient is delicate, and has been excited, and then suddenly becomes pale and falls, it is probably only a fainting fit.

Epilepsy may usually be distinguished from an attack of convulsions without much trouble. Convulsions occur chiefly in infancy, and especially when the child is cutting the first set of teeth. It is rare for epilepsy to come on at so early an age. Convulsions as a rule set in less suddenly than does an epileptic fit, the paroxysm is of shorter duration, there is no absolute loss of consciousness—at all events, at the beginning of the attack—and there is no subsequent stupor.

Now, as to the probable issue of the complaint. This is a point on which everyone is naturally most anxious. As regards immediate danger—danger, that is, to life—there is little or none. The patient always comes out of the fit, and death during an epileptic seizure is infinitely rare. This is a point on which no anxiety need be felt. But what about the chances of getting well? Will the patient in time get rid of his fits, and be as good a man as he was before? This is a question not so easy to answer, and for its solution there are a good many things to be taken into consideration. In the first place, how long has the patient been suffering from epilepsy? If he has had it for a very long time—for years and years—we can hardly hope for a perfect and permanent cure, although of course we may be able to do him a great deal of good. But when the disease has been recently established

—when the patient has had only a few fits—we are much more hopeful about it. It should be remembered that the longer the patient has been suffering, the greater the difficulty and improbability of cure. Then there are other questions to be considered. Is the epilepsy hereditary—did either the father or mother suffer in the same way? If so, it is a bad omen. When the fits set in early in life, the chances of cure are better than when the sufferer is well on in years before they begin. Then the condition of the general health is not without its influence. Contrary to what might be expected, some of the most obstinate cases are those in which the general health is good; some of the most tractable are those in which there is a disturbance that may be corrected. Again, when the intervals between the attacks are much prolonged they are less amenable to treatment than when they exhibit a more rapid recurrence.

Now as to the treatment of epilepsy. What should you do when a person is in a fit? Lose no time in loosening his collar and necktie, so that his throat may be quite free. A little care will prevent him from injuring himself by striking the floor or furniture. Put a piece of cork or india-rubber between the teeth, as it will prevent the tongue from being bitten. The windows should be opened, and all crowding round the patient should be avoided. Cold water thrown on the patient does no good. If you have a bottle of nitrite of amyl, hold it under the nose until the face flushes. Beyond this there is nothing to be done. After the attack is over, get the patient on to the bed, and let him sleep with his head and shoulders well supported.

When there is a distinct aura, it may be possible, as we have seen, to arrest the coming paroxysm by making pressure on the part; or by constricting it by means of a ligature.

What is to be done to prevent the recurrence of the fits—in other words, what should you do in the intervals of the attacks?

The great remedy for epilepsy is bromide of potassium. It must be given in good large doses to do any good—from ten to twenty grains three times a day. The bromide of potassium mixture (Pr. 31) contains fifteen grains in two table-spoonfuls. It is usually best to give it on an empty stomach—say half an hour before meals—as it is less likely to produce flatulence. Bromide of potassium nearly always does good in epilepsy. In some instances it has completely cured the patient, there never having been another attack after taking the medicine. In others it has arrested the attacks so that none have occurred for periods varying from a few months to two or three years. It is a most

wonderful drug, and we should strongly advise every epileptic who has not tried it to do so without a moment's loss of time. In some cases its effects are little less than marvellous. Even when small doses have failed, large ones may succeed. It sometimes happens that the administration of five grains will diminish the frequency of the attacks, or prevent their occurrence for a long time, and that then, the medicine being still taken, the seizures revert to their previous rate of frequency. An increase of the dose is followed by a similar succession of events; a further increase by a second succession of temporary improvement and subsequent deterioration; and so on until a larger dose of from thirty to forty grains is given three times a day, when the attacks cease altogether. The bromide of potassium should not be pronounced a failure until large doses have been given frequently. Many epileptics derive no benefit from bromide of potassium, simply because they do not take enough of it. We should advise that the medicine should be taken regularly for some weeks, or even months, after the fits have ceased. Many people no sooner get rid of their fits than they forget all about their medicine, and never think of it again until they are reminded of its value by a return of their old enemy. Another thing is that when the bromide is taken it must be taken regularly. It is of no use taking it for a day or two and then omitting it for a week, or anything of that kind. You must simply go straight on with it as steadily as clockwork. The bromide is said to prove most beneficial in those cases in which the attacks occur chiefly in the daytime; but the fact is, it answers admirably in all cases. Bromide of potassium is conveniently taken in the form of tabloids (T. 18). They are portable, and that is a great advantage to those who have to be much from home. They should be taken after meals and each dose should be followed by a glass of water. Nearly all the advertised quack remedies for epilepsy contain bromide of potassium, often in an impure form. They should be avoided.

In some people bromide of potassium produces little hard red spots on the face and shoulders. Sometimes, too, it gives rise to drowsiness, dulness of apprehension, and muscular weakness, especially in the legs. These symptoms fortunately all disappear on temporarily discontinuing the use of the drug. In some persons they never occur, even when the drug is taken in large doses, day after day and week after week. These symptoms may be obviated by a very simple precaution:—Take your bromide of potassium only six days in the week instead of seven—have a Sunday's rest in this as in everything else. This will prove successful,

and the bromide will act equally efficaciously in controlling the fits. When the bromide is taken for a very long time it may be useful to discontinue it occasionally for about a week, or the system gets accustomed to it, and it may lose its effects.

Bromide of sodium is sometimes preferred to bromide of potassium (T. 19). It may be given in the same dose, and in the same way. Some people mix it with an equal quantity of common salt—put it in the salt-cellar and use it at meals. This saves trouble, and you cannot forget to take your medicine; but by this plan you get a very variable dose.

Bromide of ammonium is sometimes used instead of the bromide of potassium, and is found to answer equally well. Some doctors use a mixture of the bromide of potassium and ammonium—thus, instead of giving fifteen grains of bromide of potassium, they give ten grains of bromide of potassium and five grains of bromide of ammonium mixed.

Bromide of strontium is said to be less depressing than any of the other bromides. It should be given in ten-grain doses three times a day after meals. It is conveniently given in the form of the five-grain tabloids, which are readily soluble in water. The other advantages of bromide of strontium are that it improves the appetite and does not disturb the digestive functions. Moreover—and this is a point of great practical importance—it does not induce the subsequent lassitude and stupor which so frequently result from the administration of bromide of potassium.

Other remedies for epilepsy are employed, but we believe that none of them are equal to large doses of the bromides.

Belladonna is, with many people, a great favourite, and it undoubtedly often answers admirably. It is indicated when, in addition to the fit, the following symptoms are present:—Sparkling of the eyes, dilated pupils, intolerance of light, flushes of heat, and redness of the face, and starting at the least noise. It may be given in three-drop doses of the tincture (T. 9), or the belladonna mixture (Pr. 39) may be employed if more convenient. If administered as soon as the indications of the fit are observed, it may succeed in arresting it. Where the case is urgent, a dose may be given every quarter of an hour for an hour, and subsequently hourly: but when it is more chronic, a dose every three or four hours will suffice.

Sulphate of copper is given in preference to belladonna when the face, during an attack, is pale and the convulsions are very severe. It should be given in very small doses frequently.

Oxide of zinc sometimes does good in epilepsy; two of the oxide of zinc pills (Pr. 66) may be given three times a day.

Inhalations of nitrite of amyl often prove useful in epilepsy. One of the vaporoles (V. 3) may be crushed in the hand and cautiously inhaled. The full effects of the drug are not obtained until the face flushes and a sense of pulsation is felt in the head. Until you learn exactly how to manage the drug it is as well to lie down whilst inhaling, but when you get accustomed to it you may take your inhalation wherever you happen to be. Even when the convulsions have commenced, nitrite of amyl will sometimes arrest them. On several occasions nitrite of amyl has rescued patients from that desperate plight called status epilepticus, a condition consisting essentially of a succession of fits linked together by intervening unconsciousness, the fits recurring with increasing frequency till, at last, no sooner is one fit ended than another begins. Sometimes nitrite of amyl succeeds better when given internally instead of in the form of inhalation.

Patent medicines should, as a rule, be avoided, but in cases of epilepsy benefit is often derived by rubbing into the spine night and morning a tea-spoonful of Chatteris oil.

Attention to diet and regimen during the intervals of the attacks is important. The patient should strictly avoid indigestible food, and should have his meals with regularity.

Plenty of exercise should be taken in the open air, although excessive fatigue should be avoided. There is no reason to interdict horse-exercise, if the patient has been accustomed to ride, for, curiously enough, a fit very rarely occurs on horseback.

Many epileptics have been relieved of their nocturnal attacks by being made to sleep with the head and shoulders well supported. It is a good plan to have a bed-rest which can be adjusted to any angle, instead of being contented with an ineffectual arrangement of pillows and bolsters.

Then about baths—they should be taken for the purpose of cleanliness and to produce a healthy action of the skin, but they will do no more. Baths will not cure epilepsy, and shower-baths, sitz-baths, and so on, usually do more harm than good.

It is very important not to let the feet get cold, especially at night. Thick woollen socks, a fire in the bed-room, plenty of blankets, and a hot-water bottle to the feet, will obviate all difficulty on this score.

Then about mental work. The parents of an epileptic child are often told that he must not do anything of any account—he mustn't go to school, he mustn't learn anything, and mustn't read, and so on. This advice, we are sure, is very bad advice. Excessive mental work might, of course, prove injurious, but it is of no use running to the other extreme. A boy must have something to occupy his time, or he will be sure to get moody and morose, and to worry about himself and his misfortunes. A couple of hours' lessons in the morning, and as much in the afternoon cannot possibly hurt anybody; and if you can only get him to take an interest in his work and like it, it may do him a great deal of good.

In epilepsy, as in other chronic diseases, cod-liver oil, quinine, and other general remedies may be given, when there are special indications for their employment. Iron should be avoided for internal administration.

ERYSIPELAS.—This is the disease which is commonly known in England as “St. Anthony's fire,” and in Scotland as “the rose.” Two different forms of erysipelas are usually recognised—“idiopathic” erysipelas, arising from constitutional causes, and attacking chiefly the head and face; and “traumatic” erysipelas, which follows a wound or injury, and may occur on any part of the body. The former variety, of which chiefly we shall have occasion to speak, is to all intents and purposes a fever, and belongs to the same class of diseases as small-pox, measles, and scarlet-fever. There is reason to believe that erysipelas is catching, although its contagiousness is undoubtedly of a low order. It not infrequently occurs as an epidemic; but it is far more common to find it haunting certain localities, and becoming what is called “endemic.”

The causes which are usually said to produce erysipelas are both numerous and diverse. Certain individuals, and even certain families, appear to be more liable to suffer from the disease than others. What is the cause of this special susceptibility it is impossible even to conjecture. Erysipelas is common in newly-born children, but from the first to the twentieth year it is by no means common; after this period to the fortieth year it is frequent as an acute disease; but in more advanced age it occurs chiefly as a chronic and less important malady. It is often said that women suffer from it more frequently than men, and that it is especially liable to make its appearance at the time of the monthly

periods and at the change of life, but these statements are not altogether borne out by facts. Gouty people have been found to suffer from it more frequently than others. Errors in diet, and especially eating certain indigestible substances, such as shell-fish, and improperly smoked, dried, salted, or preserved meats, are said to act as exciting causes. Violent mental emotions are also accused of being occasionally the cause, and it is said to have been brought on by both anger and fear. Sometimes no cause can be assigned for its onset, but its occurrence is promoted by all circumstances that tend to debilitate the body—by intemperance, by previous disease, by low spirits and anxiety, by insufficient nourishment, and by foul air. Formerly, when less attention was paid to cleanliness and ventilation, it was much more common in hospitals and infirmaries than at present. Injuries to the skin, such as abrasions, scratches, wounds, burns, or blisters, wherever they are situated, may be the starting-point of the inflammation. Sometimes even the presence of gout in a particular joint, or the irritation caused by diseased teeth in either the upper or lower jaw, may determine the seat of onset. It is probable that the most common cause of an attack of erysipelas is its communication from one person to another. In erysipelas the constitutional symptoms may precede the local, or redness of the skin may make its appearance before the fever commences. The former course is the more common.

Usually the disease begins with malaise, aching of the limbs, loss of appetite, thirst, nausea or vomiting, diarrhœa, sore throat, increased heat of skin, frequency of pulse, headache, giddiness, depression of spirits, and perhaps bleeding from the nose. There are, in fact, all the ordinary symptoms of fever; but there is no such special prominence of any symptom as would enable us to give an opinion as to the probable nature of the complaint. After a few hours, the patient may suffer from a well-marked rigor, or he may experience only a little feeling of chilliness.

After a few hours, or it may be a day or two, of these undefined symptoms, the special phenomena of erysipelas make their appearance. The inflammation usually first attacks some part of the head or face. It is most frequently seen about the nose, or ear, or mouth, or eyelids.

To the patient the part affected feels hot and burning, and on touching it, it is found to be sore, stinging and smarting. It is of a red and shining aspect, and is usually hard and swollen. The inflammation gradually extends, most commonly in only one direction, but sometimes

in several different directions. At the advancing edge the skin is so distinctly hard and swollen, that it can be not only seen but felt, whilst at the receding margin it is far less distinct. Sometimes the amount of swelling is not considerable, but at others it is enormous. Sometimes the lips swell enormously, the cheeks enlarge, the eyes are closed by the puffiness of the eyelids, and all traces of the natural countenance are effaced. A medical writer says:—"I know no disease, except perhaps confluent small-pox, by which the human face divine is so completely and speedily deformed and disguised. A stranger seeing a young female in the height of the disorder, and revisiting her after her recovery, is astonished at the change. It seems as if, by some magic process, such as we read of in our nursery tales, a hideous monster has been metamorphosed into a comely damsel." In some cases, in addition to the redness and swelling, little bladders are formed, like those produced by a blistering fluid or a scald. These bladders may attain a large size, and when they burst they leave dry and thick crusts, which render still more hideous the face they have covered. Very frequently the inflammation is quite superficial, but sometimes it dips, as it were, through the skin, and affects the subjacent tissues, giving rise, perhaps, to the formation of matter. This is often the case in the loose tissue of the eyelids, and it is more common on the scalp than on the face.

There is considerable variety in the course of the symptoms. In some cases there is a speedy diminution in their severity, both locally and generally; whereas in others the reverse is observed. The amount of swelling about the face may be sufficiently great to give rise to the most annoying, and even alarming complications; such, for example, as temporary blindness, deafness, and impossibility of breathing through the nose. Sometimes the sufferer lies patiently still, yet apparently conscious and rational, till the tumefaction diminishes, and he is once more able to open his eyes. In many cases, however, the result is less fortunate, and the patient becomes first delirious and then comatose, and may die at the end of a few days. Sometimes the disease extends to the throat, and the patient may die suddenly from suffocation. In all cases of erysipelas of the head and neck it is necessary to carefully examine the throat, count the number of respirations, and note the tint of the skin. This is more especially needful because from the vitiated state of the blood the sensations are blunted, and the patient may have a very bad throat without experiencing any pain or distress in that region. An occasional hurried respiration, or a little blueness of the lips

or finger-nails, may, if looked for, call attention to the nature of the impending mischief. In general the temperature, as ascertained by the thermometer, rises rapidly at the onset of the disease, reaching 104° , or more, in the course of a few hours. So long as the inflammation of the skin continues to spread the temperature increases, and may attain 106° . Any sudden elevation of temperature is to be regarded as an indication of the spread of disease. During the period of convalescence, a sudden increase in the fever may be an accompaniment or the herald of a relapse. Such a relapse might possibly be temporarily overlooked were it not for the use of the thermometer, for the symptoms are often almost imperceptible to the patient, and they may occur in a situation not necessarily exposed to the eye of the physician. The fever, as measured by the thermometer, is very variable in duration, and the temperature, after having returned to the normal, may exhibit several re-elevations coincident with extensions of the inflammation. Usually the highest temperature is reached on the third day of the eruption, and the decline commences on the fifth or sixth day. In fatal cases death takes place with very high temperature.

The pulse is generally full, beating at the rate of from 100 to 120 in the minute. It may revert to its normal rate at the end of the third or fourth day of the eruption, not again to rise far above this, unless indeed there be a relapse, indicated by elevation of the temperature.

That form of erysipelas which attacks only the skin is much less dangerous than that which involves the deeper parts. Cases which occur in patients with an open wound are of much more serious import than those which originate spontaneously. The termination of the disease is also less likely to be favourable when it occurs in an epidemic form.

The disease is always more serious in old people and children than in young vigorous adults. The habits and health of the patient previous to the attack greatly influence the result. Erysipelas, like many other diseases, proves especially fatal to drunkards and those whose health has been undermined by excesses of any kind.

The extent of the inflammation is usually of not so much importance as the severity of the constitutional symptoms. When there is a rapid, weak pulse, with a dry, brown tongue, or low muttering delirium, with marked prostration of strength, the case is very serious, even though the local changes may be limited both in distribution and severity.

The occurrence of delirium, and especially of delirium at night, is of no great importance, but marked drowsiness alternating with delirium is a serious symptom. Sometimes the membranes of the brain become involved, but delirium is not of necessity an indication of the occurrence of this complication.

We now pass on to the consideration of the best methods of treating erysipelas. The attendance of a medical man is in all cases absolutely necessary. The patient should be confined to bed, and attention should be paid to all those hygienic measures—such as good feeding, fresh air, and quiet—which will be found fully discussed under the head of FEVER.

In erysipelas lowering treatment is seldom or never admissible. The disease is essentially an exhausting disease, and tonic and supporting treatment is necessary. In some cases stimulants are required from the very first, and the indications for their employment are the same as those given whilst speaking of the treatment of fever generally. The strength may be supported by the administration of bark and ammonia (Pr. 13), or quinine (Pr. 9).

One of the most useful medicines in the treatment of these cases is the tincture of the perchloride of iron, or tincture of steel, as it is not unfrequently called. So marked is its action that it has been regarded by some as a specific for this disease. It is essential for its success that it should be given in large and frequently repeated doses. Ten and fifteen drop doses given three times a day do no good, and to obtain a favourable result it is absolutely necessary that it should be given in doses of thirty minims or more every four hours. It may be conveniently taken in about a wine-glassful of water. The beneficial effects of the medicine are sometimes seen after the first or second dose; the local inflammation ceases to extend; the inflamed part becomes paler, less tender, and less swollen; the feeling of exhaustion is diminished; the pulse becomes less frequent; the temperature falls, and frequently a sound and refreshing sleep ensues. As soon as these changes are observed the dose of the medicine may be reduced. The iron treatment may be combined with the use of stimulants, if there are indications for their employment.

Aconite (Pr. 38, T. 1) is of marked service in erysipelas. Administered quite at the commencement it often cuts short the attack: and even when in spite of it the disease continues, aconite will reduce the swelling and hardness, lessen the redness, and prevent the inflammation from spreading.

One of our most eminent authorities on treatment recommends aconite in the following cases:—"In children, after vaccination, perhaps when the spots have nearly healed, an erysipelatous redness occasionally appears, spreading over the arm and a greater part of the trunk, usually ceasing in one part, then successively attacking contiguous parts, and leaving a yellow discolouration and desquamation. The redness is often intense, the tissues being very hard, painful, and shiny, and this inflammation may continue for weeks. It may run down the arm, involve the hand, and implicate the greater part of the chest; or it may appear in the leg, and gradually spread to the foot; or, again, it may spread from the hand up to the arm, and once more down to the hand, and this may be repeated many times. Sometimes the inflammation terminates in small abscesses. In cases like these aconite generally at once arrests the inflammation; and even when it persists the redness is rendered less intense, and the swelling less hard and painful. The troublesome inflammation often arising after the vaccination of adults ordinarily yields to aconite, especially if supplemented by the local application twice daily of the belladonna ointment." In all these cases the aconite may be given in the form of the aconite tabloids (T. 1), one every twenty minutes for the first hour, and subsequently hourly for four hours. For young children, half or even a third of a tabloid will suffice. It is an active remedy and must be used with caution.

Belladonna certainly proves efficacious in many cases of erysipelas. It does most good in the simpler forms where no vesicles or bladders have made their appearance on the surface. It is especially indicated when there is violent headache with thirst, constipation, or brownish-red thick urine. It is also useful when either delirium or lethargy is a prominent symptom. In the early stages of the disease it may be given alternately with aconite, first a dose of one and then of the other. It may be conveniently administered in the form of the belladonna mixture (Pr. 39), a tea-spoonful every quarter of an hour for the first hour, and subsequently hourly. The tabloids (T. 9) contain one drop of the tincture in each.

So much then for the internal remedies. We must now consider the best method of local treatment. It is very desirable to avoid exposing the affected part to variations of temperature, and with this view it may be lightly covered with dry cotton wool so as to protect it from draughts. Ointments and cooling lotions, by interrupting the natural functions of the skin, often do mischief.

A solution of nitrate of silver has been strongly recommended as a

local application in erysipelas. The success of this mode of treatment depends entirely on the mode of conducting it. In the first place the skin of the affected part must be well washed with soap and water so as to remove greasy matters, then again with simple water, and then it must be wiped quite dry. Finally a solution of four scruples of nitrate of silver in eight drachms of water is to be applied twice or three times to the inflamed surface, extending for two or three inches in each direction beyond the margin.

Collodion is not unfrequently used as a local application in cases of erysipelas. It usually proves far less efficacious than the solution of nitrate of silver, and when painted over large surfaces it often not only fails to do good, but in consequence of its cracking and leaving rough edges, not unfrequently does positive harm.

EXPECTORATION.—Expectoration is merely a symptom, and is not in itself a disease. It seldom occurs except as an accompaniment of cough. The secretion of the lining membrane of the bronchial tubes in a perfectly healthy person is almost entirely destitute of matter to be expectorated. In the normal state, the secretion of the bronchial mucous membrane, though continually present, scarcely ever exists in superfluous quantity, for a certain proportion of it is carried off by exhalation or absorption. The moisture secreted by the lungs should contain nothing that the expired air cannot carry away in vapour, nothing that would leave any residuum which by its accumulation would at length require to be expectorated. A perfectly healthy person living in a pure atmosphere has no expectoration whatever. We say living in a pure atmosphere, for town-dwellers commonly hawk up a little black phlegm the first thing in the morning. This, consisting as it does chiefly of "blacks," is not to be considered as any indication of a departure from the normal condition of health. In disease there is a secretion of unhealthy mucus which cannot be got rid of in the usual way, and must be expectorated. Hence it is that persons in whom a chronic condition of congestion of the bronchial tubes has been generated by repeated colds have a secretion of superfluous matter always going on, and are constantly expectorating. This may continue for years without causing much inconvenience, the principal annoyance from which the patient suffers being in getting up the phlegm in the morning. It is a remarkable fact that, though a person may cough violently in his sleep, he never expectorates.

An examination of the expectoration is useful not only in enabling us in many cases to determine the nature of the disease, but as affording many a useful hint for treatment. The sputa in pneumonia or inflammation of the lungs, for instance, is very characteristic. It is of a brick-dust colour, and is so viscid that the vessel in which it is contained may be inverted without spilling the contents. In bronchitis, you may get many different kinds of expectoration. If the patient do not expectorate till after a long fit of coughing, during which the air has been many times inspired and expired, and has thus become intimately mingled with the mucus contained in the air passages, the expectoration will contain numerous little air-bubbles, and will be very frothy. After a time the mucus loses by degrees its transparency, is mixed with masses or pellets that are opaque and of a yellow-white or greenish colour, and these masses, few at first, increase more and more in number until they constitute the whole of the sputa. Such expectoration as this is commonly marked by a remission in the symptoms. It will sometimes happen that the expectoration, having thus become opaque and parti-coloured, will go back again to its former condition of temporary stickiness and froth, and this is to be regarded as a sign of a return or extension of the complaint. By the character of the expectoration alone we are in the majority of cases enabled to distinguish between bronchitis and pneumonia. In one kind of bronchitis pieces are expelled which are complete casts of the bronchial tubes, and when spread out in water look like little trees. This complaint is known as "plastic" bronchitis. Many different kinds of expectoration are met with in consumption, but there is no form which to the naked eye can be regarded as a positive indication of the existence of that disease.

As we have said, the character of the expectoration may sometimes be employed as a guide to treatment. Thus, when there is profuse easy expectoration with nausea or vomiting, small doses of antimony wine are indicated. When it is tough and stringy and expelled with difficulty, bichromate of potash often does good. When loose and worse on lying down, pulsatilla may be given, especially in the case of women and children. Nitric acid is useful in old-standing cases, especially when the more active lung symptoms have subsided. Brown-coloured expectoration is considered by many to be an indication for the use of phosphorus. Sulphur is given when the mucus is yellow or white, and when there is any concomitant skin eruption. Arsenic (T. 7) is used when there is much debility and a tendency to asthma. Details as to the mode of administration of these medicines

will be found under the head of COUGH and in other parts of this work.

When expectoration is very difficult, relief is afforded by the use of



AMMONIUM CHLORIDE PORTABLE PIPE INHALER.

the Ammonium Chloride Portable Pipe Inhaler. It is an ingenious invention, and may be used without the slightest hesitation.

FAINTING.—A fainting-fit arises from sudden failure of the heart's action. It is met with most frequently in young adults, especially in young females. Its occurrence is favoured by general debility or ill-health, and more particularly by anaemia, or poorness of the blood. It is very common in young ladies who take very little out-door exercise, and spend most of their time on the sofa reading novels. Want of active occupation powerfully predisposes to fainting. People who are not very strong are most likely to faint after some unusual fatigue, or after long abstinence from food. A liability to fainting seems almost to be hereditary, so common is it in some families. Sometimes it is associated with heart disease, but in the vast majority of cases it is purely functional, and there is nothing wrong with that organ.

The determining causes of a faint are very variable in character. In susceptible subjects it may be brought on by any sudden impression on the nervous system. This need not of necessity be painful or unpleasant, for people may faint from excitement or excess of joy. For instance, the sudden announcement of the return of some long-lost relative, or of the favourable termination of a protracted lawsuit, may be the exciting cause. The sight of certain animals, such as a frog, or a black-beetle,

or even a mouse, is quite enough to send some people off, whilst others faint immediately at the sight of blood, and even feel sick and faint if they read of an accident in the papers. We have all heard the story of the young curate who fainted on having to read the account of one of the sanguinary battles in the Old Testament. Medical students sometimes faint at their first operation. Such a trivial accident as pricking the finger will make some people feel sick and faint.

A fainting-fit is so sudden in its occurrence that it is not easy to describe it. Usually there is at first a feeling of faintness, then of sickness and giddiness, there is a blank before the eyes, and everything seems as if it were swimming about or going round and round, the face becomes deadly pale, the hands and feet get cold, the teeth chatter, and the patient feels as if she were sinking backwards, or going down and down ever so far. As the faint passes off and consciousness returns there may be a deep sigh.

There are one or two complaints from which a fainting-fit has to be distinguished. In the first place, from epilepsy. There is not the slightest difficulty in distinguishing it from an ordinary epileptic fit, but from attacks of epileptic vertigo or *petit mal*, as we call it, there is often very great difficulty, for they run so very closely together. In attacks of *petit mal* the fit comes on more suddenly, and the loss of consciousness is distinctly marked. In fainting the insensibility is not absolute, and when it is over the patient can often tell what occurred, although at the time she was unable to speak. Then again, people rarely faint without some definite cause. If a young woman sitting or lying down in a room with plenty of fresh air suddenly becomes insensible, without having received bad news or anything of that kind, it is something more than a mere faint, and is probably a fit.

There is usually little difficulty in distinguishing a faint from an attack of hysterics. In the latter case the patient will be found sighing, laughing, or crying, or endeavouring to attract attention in some way or other. Moreover, if you feel her pulse you will find that it is beating strongly, affording positive proof that the heart has not ceased beating. Of course a person who is habitually hysterical may have a fainting-fit, but this is a circumstance which, if borne in mind, would give you no trouble as regards diagnosis.

You are not likely to confound apoplexy and fainting. Apoplexy may of course occur in young people, but is far more commonly met with in the middle-aged, or those advanced in life. A fainting-fit, moreover, is never followed by paralysis.

The danger of a fainting-fit is usually slight. In the great majority of cases the patient comes-to in a few minutes. If a person faints from a very trivial cause, it shows that there is some constitutional weakness, or at all events that the health is very much below par, and energetic treatment will have to be resorted to.

Next, as to the treatment of fainting. What are you to do for a person who is in a faint? If the patient has fallen on the floor, you should leave her in that position, and should on no account raise the head. If she has not fallen to the ground, but only back in a chair, put your hand behind her neck, and depress her head till you bring it right down between the knees. By this method, the blood runs down into the head, and this is just what you want: it is much better than lying the patient flat on the floor, for in that case, as the heart is not doing its work, you won't get the blood pumped up to the brain. You may sprinkle a little water over the face—a few drops will do as well as a larger quantity. When the face is pale and cold, use tepid water. A little ammonia or sal-volatile, or a bottle of smelling-salts, held under the nose, will often restore consciousness. Musk or camphor will answer almost equally well. It is a good plan to keep the hands and feet warm, and to chafe the chest over the region of the heart with a little spirit or eau de Cologne. As soon as the patient can be got to swallow, you had better give some brandy and water, or sal-volatile, or chloric ether, or any other stimulant that may be at hand.

To prevent further attacks, the great thing is to pay attention to the general health. Live as well as you can. Spend most of your time in the open air. Give up novel-reading, and go in for lawn tennis, croquet, or something of the kind. If you can, learn to ride, and take a good gallop every day. If you haven't a horse, don't forget that you have a pair of legs, and that a good brisk walk is one of the finest tonics in the world. Many women nowadays ride a bicycle or tricycle. A cold sponge-bath in the morning is good for you, but you may have the chill off just at first. Pay attention to your bowels, and see that they are open every day regularly. If not, you will learn from the article on constipation (*see* CONSTIPATION) what to do. If you are suffering from poorness of blood or anæmia, you will have to take iron (Prs. 1—7, or T. 15, 34, 38, and 65). If you are thin and weak, and badly nourished, cod-liver oil will be your remedy, or you may derive benefit from the hypophosphites (Pr. 55). If you are a town-dweller, try and get away in the country. A week or ten days in a country-house, or at a farm, will do you all the good in the world. If you go to the sea-side, try and get

some sea-bathing. If you live in the country, get someone to invite you to come up to town for a bit, and do not hesitate to enjoy yourself as much as possible. A course of balls, and theatres, and concerts, or whatever your special form of dissipation may be, will do you no end of good—even more good than our medicines, and that is saying a great deal.

FEET—SWEATING OF THE FEET.—Offensive perspiration of the feet is a complaint from which many people suffer. It is often the cause of the greatest mental anxiety. We will give a few directions for its treatment.

In the first place, the condition of the general health should be investigated. Should any fault be detected it must be set right. For anæmia or poorness of blood, iron (Prs. 1, 2, and 3, or T. 15, 34, and 65) is the remedy; for loss of appetite, quinine (Pr. 9, or T. 63); for general debility, cod-liver oil; for mental anxiety or overwork, the hypophosphites (Pr. 55), or the tonic tabloids (T. 79). The bowels should be kept regular.

Out-door exercise should be taken daily. Stimulants are allowable only in the strictest moderation. Scrupulous attention should be paid to cleanliness. A cold bath should be taken every morning. The feet should be washed in tepid water night and morning, and oftener if possible. The addition of sea-salt to the water may do good, but when the perspiration has a sour acrid odour a little vinegar is better. The socks should be changed as soon as they get soiled, and they should be thoroughly washed each time, and not merely dried. The boots should have broad soles and square toes, so as not to cramp the feet, and should have a hole; patent leather is to be avoided, and the same pair should not be worn every day.

A dusting powder composed of equal parts of oxide of zinc and starch with a few grains of thymol often proves useful; it should be sprinkled freely inside the socks. Belladonna liniment rubbed into the feet three or four times a day often effects a cure. Sometimes it fails, but on the whole it is a very reliable mode of treatment. Liquid extract of ergot in ten-drop doses three or four times a day sometimes does good. Some doctors employ an ointment composed of equal parts of lead plaster and linseed oil, spread on linen and wrapped round the feet, the application being renewed every third day for nine days.

FLATULENCE OR WIND.—Flatulence, wind, spasms, or belching—for this affection is known by all these names—is one of the commonest symptoms of dyspepsia, and is often the one of which the sufferer is most anxious to be cured.

Dyspeptics nearly always complain loudly of the “wind in their stomachs,” and frequently enough regard it as being at once the essence and cause of all their discomforts. The gas that produces all this trouble is usually derived from undigested food, detained in the stomach and undergoing a process of fermentation or of simple putrefactive change. It is thought that sometimes it is formed by the stomach itself, for the flatulence may come on when that organ is quite empty. Many people always suffer from this disorder if a meal happens to be delayed beyond the accustomed hour. Sometimes the flatus is quite tasteless, whilst at others it is attended with both the flavour and odour of rotten eggs. Flatulent dyspepsia occurs far more frequently in women than in men. Nervous and hypochondriacal women, who partake freely of tea, are very liable to suffer from it, especially when there is a general relaxed condition, and want of tone of the system. Frequently the gas accumulates so quickly in the stomach and intestines, and leads to such an amount of distension of the abdomen, that patients have to loosen their clothes from inability to bear their tightness. In many people flatulence is always produced by the use of any food which is liable to undergo rapid fermentation.

Fortunately, we have many drugs at our command which prove useful in treatment of this complaint. When it is dependent on indigestion, the rules applicable to the treatment of that condition may be advantageously followed. When not obviously associated with dyspepsia, it may often be cured by the avoidance of vegetable food, and tea and beer. Sugar and starchy foods must be avoided or sparingly eaten; and thin, well-browned toast may be substituted for bread. The meals should be very moderate, the food well masticated, and drinking postponed till the meal is nearly finished, or better still, till an hour or so after its completion. A due regulation of the periods for taking food will often suffice to obviate the flatulence which belongs to emptiness. It should be remembered that tea is especially obnoxious to flatulent people. Half-fed seamstresses, who subsist chiefly on weak tea and bread-and-butter, are frequent sufferers from this complaint.

A very common remedy for flatulence is a dose of sal-volatile—from thirty to forty drops in a little water. It seldom effects a cure, and at the best can be regarded only as a palliative. The “soda-mint”

tabloids (72) are excellent. One of the best remedies with which we are acquainted is oil of cajeput—three drops occasionally on a piece of sugar. It does not prevent the formation of wind, but it brings it off the stomach and eases the chest. Anyone suffering from flatulence would do well to try this. Sometimes oil of cloves or oil of carraway is given in the same dose and in a similar manner. Five drops of pure terebene or of pinol on a little piece of sugar or crumb of bread will be found to afford the desired relief. Horseradish often proves very useful—from half a tea-spoonful to a tea-spoonful of the compound spirits of horseradish being taken three or four times a day in a little water. Drop doses of pure chloroform taken in a little water often succeed in dispelling the wind. Essence of ginger, an old-fashioned remedy, often does good in flatulence.

Charcoal is of great value in many cases. Sometimes the wind is produced in enormous quantities and with great rapidity, giving rise to distension, eructation, and mental depression, the sufferer complaining only of these symptoms, and not of pain or acidity. This enormous production of gas, irrespective of other symptoms, prevails chiefly among middle-aged women, especially at the change of life. It may be met with during pregnancy or suckling, or less frequently in the victims of consumption. This condition is usually met by the administration of wood charcoal in from five- to ten-grain doses. It can be obtained in the form of tabloids. When, after a few mouthfuls of food, the wind is formed in a quantity so large that the sufferer is constrained to cease eating, the charcoal should be taken immediately before each meal. When, on the other hand, the patient is not troubled with the wind until half an hour or so after food, the charcoal should be taken soon after the meal. Sometimes profuse formation of wind is accompanied by acidity, and then the charcoal will generally remove both these symptoms. Charcoal may be taken in the form of a powder, but charcoal biscuits are nicer and are more efficacious. The Scotch custom of eating a crust of bread burnt brown is not a bad one. Sometimes the efficacy of the charcoal is enhanced by mixing with it an equal quantity of carbonate of bismuth. Should charcoal or charcoal and bismuth fail to remove these symptoms, the substance known as sulpho-carbolate of soda should be tried. It dissolves readily in water, and may be given in doses of fifteen or twenty grains three or four times a day. We often meet with people, generally women, who suffer from what is ordinarily called "spasms." The patient complains of considerable flatulence and distension, often limited to one part, or at all events most

marked at one part of the abdomen, generally on the left side under the ribs. It is accompanied by considerable pain, which is temporarily relieved by the eructation of a little wind, but soon returns, and may last for many hours. This condition is usually relieved by sulphocarbonate of soda in twenty-grain doses, or, should this fail, some preparation of phosphorus may be tried—say five drops of phosphorated oil on a piece of sugar three times a day.

Sulphurous acid taken in water, in from five- to ten-drop doses, often prevents flatulence produced by fermentation, and is especially useful when the gas is abundant. Ten or fifteen drops of dilute hydrochloric acid, in a wineglassful of water, a quarter of an hour before meals, will often prevent the occurrence of flatulence following food. A tea-spoonful of glycerine in water three times a day will be found useful.

Very frequently nothing succeeds in flatulence like assafoetida. For adults a five-grain compound assafoetida pill may be taken three times a day, or every four hours. In the flatulence of young children unconnected with constipation or diarrhœa, a tea-spoonful every hour of a mixture containing a drachm of the tincture of assafoetida to half a pint of water, will relieve the distension speedily, and is usually taken without any difficulty. When the flatulence is due to constipation or diarrhœa, assafoetida does little good.

In some forms of flatulence the carminative mixture (Pr. 17) in tea-spoonful doses is useful. One of the best remedies for the flatulence of children is the old-fashioned dill-water. A tea-spoonful may be given occasionally when the wind is troublesome, or two spoonfuls with a drop of cajeput oil may be administered every four hours. When the child's health is bad, and the digestion is imperfect, generally with annoying flatulent distension, three or four pale, clayey pasty, stinking motions being passed in the day, a tea-spoonful of the above-mentioned carminative mixture given every hour, or, what is even better, one of the sugar and grey powders (Pr. 71) every hour or two hours, to the extent of six doses, will usually quickly effect a cure.

Nux vomica is more or less serviceable in flatulence of all kinds. A tea-spoonful of the nux vomica mixture (Pr. 44) may be taken every four hours for twenty-four hours.

FLUSHING OF THE FACE.—This may occur as a symptom of dyspepsia, but it is often met with without any derangement of the digestive organs. Many women, from the sudden arrest of menstruation, or

depraved health, or nervous depression, suffer from heats and flushes. The flush usually starts from some particular spot, such as the pit of the stomach, and then spreads all over the body, even the backs of the hands becoming of a bright scarlet colour. The sensation of heat may be so urgent that the patient undoes her clothes or throws off the bed-clothes, and even opens the windows in the coldest weather. These heats last for a variable time, from a few minutes only to an hour or more. They usually come on without any warning and without any attributable cause. We have known cases in which they have occurred fifty or a hundred times in the day. Sometimes there is a sensation of heat without any flushing of the skin. Frequently they are followed by "chills" or by perspiration, which may be very profuse. These symptoms are often associated with coldness of the extremities, the feet and hands being often icy cold. They occur most frequently in women about the time of the change of life, but younger women are occasionally sufferers. The best treatment is nitrite of amyl. Six minims of nitrite of amyl are dissolved in half an ounce of rectified spirit, and of this mixture three drops are to be taken on sugar every hour, or whenever the heats are troublesome. Benefit may be experienced immediately, or not till the expiration of some days, or even a week. As the patient grows accustomed to the remedy the dose should be gradually increased. We need hardly say that the mode of treatment is safe, and that it never produces even the slightest inconvenience. The inhalation of nitrite of amyl (V. 3) often proves useful.

Sometimes the occurrence of these heats and flushes is associated with considerable nervous depression. The patient may be so despondent as to feel as if she would go out of her mind. She may be so irritable as to be unable to fix her attention on anything, and the slightest noise causes the greatest distress. There is often considerable restlessness at night, the sleep being broken by harassing dreams. This condition is often the result of overwork, grief, worry, or too long residence in towns, and want of change of air and scene. When the heats and flushes are the predominant symptoms, nitrite of amyl given as above will nearly always effect a cure; but when mental depression, nervousness, and sleeplessness predominate, bromide of sodium proves even more successful. The best way to give it is in the form of the tabloids (T. 19), three dissolved in water three times a day. Sometimes, however, all medicinal treatment fails to effect a cure, the symptoms recurring again and again, and then the only thing to be done is to get a thorough change of air and scene. Probably the best remedy is to travel on the Continent

for from three to six months, but this few people can afford to do.

The flushings of the face, and hot and cold perspirations, are often relieved by *nux vomica* (Pr. 44), particularly when one or two drops of *pulsatilla* (Pr. 43) are added to each dose. This treatment often controls the distressing flatulence associated with this condition, and removes the sensation of heat and weight on the top of the head.

Valerianate of zinc is a useful remedy for many of those numerous, distressing, and changeable symptoms to which we have referred. It will sometimes remove not only the flushings of the face, and the hot and cold perspirations, but also restlessness, nervousness, depression of spirits, sensation of suffocation in the throat, throbbing of the temples, and fluttering at the heart. It will even succeed when these symptoms are associated with derangement of the womb, piles, dyspepsia, or constipation. It must be admitted, however, that sometimes it fails in the very cases in which we should have expected that it would do good. The dose is five grains three times a day, and it may be taken in the form of pills or dissolved in water as a mixture. Should the valerianate of zinc fail, tincture of valerian taken in water in teaspoonful doses three or four times a day may be employed with a fair prospect of success.

Oxide of zinc pills (Pr. 66) have been highly recommended in the treatment of these distressing symptoms. One or two should be taken three times a day.

GALL-STONES AND BILIARY COLIC.—Gall-stones are usually formed in the gall-bladder, but occasionally in the substance of the liver. Sometimes they occur singly, and sometimes in considerable numbers. When they are solitary they are usually globular or oval, or pear-shaped. When there are several, they commonly have numerous polished facets, the result of mutual pressure and frietion. Sometimes they are found accurately fitted to each other, and then they are said to be articulating. They vary in size from a small seed to a hen's egg. Their weight is inconsiderable; when fresh, they are heavier than bile or water, but when dried they readily float. They vary in colour from a pearly-white to a deep black, but most commonly they are of a reddish-brown tint. They consist of a substance known as cholesterine, with a certain amount of colouring matter. On cutting them open, they are usually found to have a nucleus or core. In exceptional cases, this nucleus may be some

foreign body, such as a dead round-worm, a piece of a needle, or even a plum-stone. The body, or that part of the concretion between the nucleus and the crust, is marked with lines or furrows, consisting of radiating crystals of cholesterine, or it presents concentric rings or laminae, or is formed of an irregular mixture of cholesterine and colouring matter. The outer crust can often be separated from the body like a shell; it consists of concentric layers of different thickness, made up chiefly of cholesterine.

The tendency to gall-stones is rarely manifested before the age of thirty, though in rare instances they have been known to occur in children. Women are more liable to suffer from them than men, probably from their sedentary habits. Excess in eating often predisposes to the formation of these bodies, and so does the habit of taking only one meal in the twenty-four hours, in consequence of which the gall-bladder is not emptied with sufficient frequency.

As long as a gall-stone remains in the gall-bladder, it as a rule does no harm; but should it be forced into the narrow bile-duct, it causes the most exquisite pain, and the patient suffers from what is known as biliary colic. The pain that attends the passage of a gall-stone through the duct is agonising. Perhaps there is no pain to which the body is subject that is more severe. Women who have had families say that the pains of child-birth are nothing in comparison. We can hardly wonder at this when we reflect that through a tube, of which the natural size scarcely exceeds that of a goose-quill, there sometimes passes a stone as big as a walnut.

The attack usually comes on after the principal meal of the day, or after some severe muscular exertion or shaking of the body. Sometimes the patient is forewarned of his approaching trouble by a feeling of sickness, with much flatulence and an unusual disturbance of the nervous system. In many cases he is seized suddenly with violent pain, but more commonly it is moderate in its onset, and gradually increases in severity. The pain usually starts from the pit of the stomach, and spreads upwards perhaps to the shoulders, but never downwards. It is usually of two kinds—a dull, aching pain, which is constant, and an acute, agonising pain, which comes on by fits and starts. The pain is often so excruciating that a strong man rolls on the ground in his agony. Sometimes he bends himself nearly double, changing his position every moment in the vain endeavour to obtain some relief from his sufferings. The pain may be so intense as to cause strong convulsions. At the onset it is relieved by pressure, and the patient keeps

his hands applied to the pit of the stomach, or rests perhaps the weight of his body on some hard substance placed beneath his stomach. Subsequently there may be intense tenderness of the abdomen, probably in part due to the repeated straining and retching. The paroxysms if frequent and protracted induce great lassitude and exhaustion, the face being pale, the pulse slow, and the whole body covered with a profuse sweat. With the pain there is generally much nausea and vomiting, and sometimes hiccup, and the matters vomited are usually very sour. The patient is flatulent and dyspeptic, languid and gloomy. Sometimes inflammation arises, and then the pulse becomes frequent, and the skin hot, and thirst and headache are complained of. Most commonly there is jaundice, but not always, for the stone may be angular in shape and permit the egress of bile. At length, however, the concretion passes into the bowels, the pain suddenly ceases, and all is soon well again. When once a large calculus has forced its way through the duct, this remains permanently dilated, and smaller stones may afterwards be voided without pain or trouble. Some people get rid of scores of gall-stones in this way in the course of their lives. Generally the stones are voided with the stools, and they should always be looked for. It is a great satisfaction to find your enemy, and make sure that you have got rid of him. If you don't see the calculus, you can never be absolutely sure that it has not fallen back into the gall-bladder, instead of getting through the duct. You must remember that in some cases the stone may not be passed for some days after the sudden subsidence of the pain. You will have to exercise a certain amount of care and attention in looking for the gall-stone in the motions. As we have seen, gall-stones when dried readily float on water, but they will not do so in their natural condition. It is not enough, therefore, to mix the feces with water, and trust to the calculus floating up to the top, for it won't. It is necessary that the whole of each alvine evacuation should be carefully passed through some kind of fine sieve. It may be a disagreeable thing to have to do, but it is a great satisfaction to find the stone, and make sure of it. In one case, a man collected fifty-five small biliary calculi, which he voided within the space of five weeks.

When concretions pass which are small and angular, having several flat surfaces, the trouble is probably not over, and more may be expected. If a single stone come away, large, smooth, and roundish, we may trust that there are none left behind.

Now, as to the treatment of an attack of biliary colic. What are

you to do when you are seized with the pain? Take a draught containing fifteen drops of laudanum, fifteen drops of chloric ether, half a teaspoonful of sal volatile, and twenty grains of carbonate of magnesia, in a wine-glassful of water. Should you not have all the ingredients at hand, put in as many as you can. If you have no other remedy at hand dissolve half a dozen soda-mint tabloids (T. 72) in a tumblerful of hot water and take that. Anything that ordinarily relieves spasm may do good. A stiff glass of hot gin and water is always readily obtainable.

A hot bath should be prepared as quickly as possible, and the patient should stay in it as long as he can bear it, or until he feels some relief. As a rule the pain is so great that he cannot remain quiet for any length of time, and soon wants to come out.

Hot poultices, or fomentations sprinkled with laudanum, or belladonna liniment may then be applied to the abdomen. A mixture of equal parts of belladonna liniment and chloroform liniment applied as a fomentation over the liver, or the seat of pain, under oiled-silk, will often give great relief.

Immediate relief is sometimes afforded by large draughts of hot water, containing two drachms of bicarbonate of soda to the pint. The soda counteracts the distressing symptoms produced by the acidity of the stomach, while the hot water acts like a fomentation to the seat of pain. The first portions of water are commonly rejected almost immediately, but the treatment may be repeated, and after some time it will usually be found that the pain will become less, and the water will be retained. Another advantage is that the water abates the severity of the retching, which is usually most severe and dangerous when there is nothing on which the stomach can react. This plan does not supersede the use of laudanum, and in some cases a few drops may be advantageously added to the bicarbonate of soda solution, if it has been once or twice rejected.

Should these measures fail to afford relief, a hypodermic injection of morphine will have to be given, but it will be necessary to send for the doctor. A quarter of a grain of morphine—that is, three minims of a one-in-twelve solution—injected under the skin of the forearm will usually afford relief. This is the full dose, and should not be exceeded. When much laudanum or opium in any form has been administered, less morphine should be injected, say one or two minims. The great advantage of the hypodermic injection of morphine is that it acts so promptly. It must not be given to children or young people. When a

hypodermic syringe is not at hand, a pill containing half a grain of solid opium, or an eighth of a grain of morphine, may be given every four hours till three doses have been retained, or the pain subsides. If the patient is at all drowsy he is not to have any more opium or morphine in any form.

Belladonna is another excellent remedy, and is indicated when there is any reason for not giving opium. Four pills may be ordered, each containing a quarter of a grain of extract of belladonna, and one of these may be given every two hours. A subcutaneous injection containing one-hundredth of a grain of atropia—the active principle of belladonna—with an eighth of a grain of morphine may be administered, and repeated if necessary every four hours. We strongly advise that such remedies as these should be given only by a doctor: but a patient is often placed in circumstances in which it would be impossible to obtain skilled medical assistance, and yet it is felt that something must be done to relieve the pain.

The inhalation of a little ether or chloroform will, even in very severe cases, afford almost immediate relief. We prefer ether to chloroform. About twenty drops should be placed on a piece of lint or on a handkerchief, which should be held some three or four inches from the nose, and the vapour gently inhaled; it may be repeated after a short interval. The object is not to render the patient insensible, or to get him under the influence of the anæsthetic—that should be carefully avoided—but simply to relax the spasm and ease the pain. The patient is not to use the ether or chloroform himself, but someone is to do it for him. If there is no one to help him he may use one or two of the vaporoles (V. 2). The contents of one or two of the nitrite of amyl vaporoles (V. 3) inhaled in a similar way will often prove efficacious. When the patient flushes in the face, he is under the influence of the amyl, and requires no more. It often produces a peculiar sensation of pulsation in the head, but never insensibility.

At first there will be no occasion to check vomiting if present, but when there is frequent and severe retching attended with pain, it will have to be stopped. The bismuth mixture (Pr. 18), with or without the addition of two minims of dilute hydrocyanic acid to each dose, soda water, or sucking ice will often succeed. Purgatives are of little use in expelling the stone, and simply exhaust the patient.

What means must you take to dissolve or prevent this formation of gall-stones? What are you to do when your attack is over to guard against another? The great thing is to take saline purgatives and

alkalies dissolved in large quantities of water. If you can afford it and spare the time, go to Carlsbad, Marienbad, Homburg, or Vichy, and drink the waters there; if you cannot get away you must use the Carlsbad salts at home. They should be dissolved in a large quantity of water—two or three pints—and taken tepid; you will soon be able to determine the dose for yourself. It should be taken in the morning before breakfast, the drinking being prolonged over an hour or more, and if possible combined with out-door exercise. It is essential to adopt a dietary similar to that in use at Carlsbad. Breakfast, which is taken about an hour after the waters, consists merely of weak tea or coffee, with milk and a little sugar, and small, well-baked rolls, or stale bread. Dinner is taken at one, and consists of soup free from fat or spices, and thickened with barley, rice, or vermicelli; meat, such as beef, mutton, lamb, poultry and game, with boiled fresh vegetables: and a light, simple pudding, or compote of stewed fruit. A cup of coffee may be taken in the afternoon, or a light supper at eight. The following articles of diet are forbidden: fat, butter, cream, pastry, cheese, pork, goose, sausages, salmon, mackerel, herrings, anchovies, entrées of all kinds, spices, pepper, onions, garlic, dressed salads, cucumber, uncooked fruit, and spirits. Nothing stronger than light claret is to be taken to drink, and even this should be avoided if possible. Smoking is allowed, but in the strictest moderation. The treatment is to be continued for thirty days. This plan can be carried out just as well in England as in Bohemia, although there are of course decided advantages in obtaining change of air and scene.

Many people dislike the taste of the Carlsbad water or salts and prefer Franz Josef water, which is just as efficacious and is decidedly more palatable. Benefit is often derived by dissolving a couple of lithia tabloids (T. 52) in a tumblerful of Rosbach water and taking it the first thing in the morning before breakfast. Some people pin their faith on Hashra tea and take a tea-spoonful of the herbs infused in a tumblerful of hot water every night at bedtime.

In addition to these measures it will be necessary to attend to the digestion and general health. Small doses of blue-pill (T. 16) are sometimes useful; this treatment seems to increase the quantity of bile, and at the same time to render it more healthy, and certainly it improves in a striking manner the general health.

GATHERINGS.—(*See DOMESTIC SURGERY.*)

GIDDINESS.—Giddiness or vertigo, as it is technically called, occurs in two different forms: in one the patient feels giddy, but objects about him remain stationary; in the other external objects assume various abnormal positions—for example, articles of furniture in the room, or the patterns on the paper, seem to chase each other round the apartment, or in rare cases the vehicles in the street appear upside down, or the pavement undulates or feels elastic. The patient on attempting to walk sways from side to side, and can preserve his balance only by a strong effort of the will. There is a perpetual fear of falling down, and of coming in contact with other people or surrounding objects. In slight cases vertigo occurs only on movement; in severe ones when at rest also, and even during sleep.

The sufferer from giddiness often experiences other anomalous and distressing sensations. Sometimes he sees only halves of things, or everything may seem double. One woman assured us that she always saw two cabs or two omnibuses in the street instead of one. The images were so distinct that she was often unable to distinguish the real from the imaginary. This was inconvenient, for she sometimes hailed the wrong omnibus by mistake. She said that if she were going up a hill, and a cart were in front of her, she saw a long line of them. This patient was somewhat prone to exaggeration, but we have no doubt that her statements were in the main correct. Sometimes this double vision is a precursor of paralysis. We are told of a sportsman who one day, when out shooting, disputed with his gamekeeper as to the number of dogs they had in the field. He asked him how he came to bring so many as eight with him. The servant assured him that there were but four, and then the gentleman became at once aware of his condition, mounted his horse, and rode home. He had not been long in the house when he was attacked with apoplexy, and died. This, of course, is an extreme case.

Some people who are subject to vertigo are also deaf, whilst in others the hearing is abnormally sensitive. With some the noise of passing vehicles assumes the intensity of thunder, whilst with others ordinarily loud sounds appear clear, but soft and distant. Sometimes in addition to the giddiness there is singing in the ears, it may be low like the hissing of a tea-kettle or loud like the working of machinery, or perhaps rumbling like the passing of a distant train. These noises may be always present more or less, but usually they are loudest during an attack of giddiness.

Vertigo may be due to brain disease, but in a great number of cases

it arises from disorder of the stomach or liver. Sometimes it occurs quite suddenly, the sufferer being at the time apparently in a state of perfect health. Often enough an attack may be distinctly traced to an imprudent indulgence in some particular article of food. When it comes on at night a heavy dinner or a hasty supper will often account for it. In the case of a gentleman who was suddenly seized with giddiness whilst walking in the street, the attack was attributed, probably correctly, to his having eaten very heartily of sausages and Devonshire cream at breakfast. It would seem that in many cases digestion progresses satisfactorily up to a certain point, when owing to some temporary excitement or worry the process is suspended, the stomach is upset, this causes disorder of the circulation in the brain, and the result is an attack of giddiness. Even when no special exciting cause can be detected the attack is often stomachal in origin. It may happen that the patient feels assured that his digestion and liver are in perfect working order, and yet for all that treatment directed to those organs will effect a cure. Stomach giddiness differs in several important respects from giddiness resulting from brain disease. Thus it is never associated with loss of consciousness, and at times the patient is perfectly free from it. It is increased by excitement, by long fasting, and usually the severe attacks occur when the stomach is empty. A stimulus in the form of wine or brandy affords relief, and so does food taken in moderation. Sometimes, though not always, closing the eyes, or gazing steadily at some fixed object, mitigates the intensity of the sensation or affords temporary relief. In some cases the giddiness is slight but almost constant, but more frequently it comes on in paroxysms lasting from a few minutes to an hour or more.

Another cause of giddiness is over-work. It occurs chiefly in those who, in addition to being over-worked, are not too well blessed with this world's goods. Those who are in comfortable circumstances and well fed may do many things with impunity which soon tell on those who are ill-clothed, badly lodged, and have not enough to eat. This kind of vertigo is common enough in hospital practice, the victims of it being very often poor seamstresses and others in a similar position of life. The attacks are usually of short duration, they occur at intervals of some hours or days, and especially after prolonged exertion, or poorer diet than usual. People in a rather better social position sometimes suffer from this form of vertigo, and it is then usually associated with a want of clearness of intellect, and an incapacity for sustained mental exertion. Sometimes irritability of temper, restlessness, a sense of

impending evil, and more rarely sleeplessness are complained of. Sometimes the giddiness is induced by the appearance of objects in motion, and this may occur with such frequency that the patient is practically confined to the house. It is probable that in many of these cases there is a general state of debility or want of vitality, of which the giddiness is only one of the exponent symptoms.

Sometimes swimming in the head depends entirely on disease of the ear. These cases are comparatively rare, but we have met with two or three very striking instances. There is usually an association of vertigo on movement, with singing in the ears and partial deafness. This combination of symptoms is sometimes known as Ménière's disease, after the French doctor who first described it. Persons in fair average health, and without any stomach or other obvious disorder, usually suffer most.

Giddiness occurring in the aged often arises from the stomach, but is frequently met with independently of any disturbance of that organ. As years go by the vessels of the brain lose their elasticity, and the circulation becomes irregular, so that there is congestion in one part and deficiency of blood in another.

In persons under fifty years of age, giddiness is not a complaint that need give rise to much anxiety. There is no danger to life—the fear of apoplexy or paralysis is as a rule unfounded. Sudden and violent attacks of vertigo, however unpleasant they may be, are seldom dangerous, and in the vast majority of cases depend on some disorder of the digestive organs. In persons over fifty the occurrence of vertigo for the first time calls for strict investigation. A constant sense of uncertainty in movement, a susceptibility or inclination to giddiness from the motion of passing objects, especially if combined with a cloudiness of intelligence, is not a favourable omen. When a severe attack without obvious cause occurs to a person advanced in life, the greatest care must be taken, the more so if it be associated with vomiting, or constant nausea, tingling of the extremities, or pins and needles in the hands or feet. It may be laid down as a rule that the longer the complaint has existed in any given case, the less likely is it to prove dangerous.

Giddiness occurring in people below the age of forty often yields readily to remedies directed to the liver and stomach. It is a good plan to begin treatment with a blue-pill (T. 16) at bed-time, and a black draught or dose of rhubarb in the morning. If the bowels show any tendency to become constipated, they may be kept in order with Friedrichshall or Franz Josef water.

For correcting acidity and improving the tone of the stomach, the gentian and soda mixture (Pr. 14) should be taken in two table-spoonful doses three times a day, half an hour before meals. The addition of five minims of tincture of nux vomica to each dose often increases its efficacy. Food should be taken in small quantities, and should be well and frequently masticated.

Should the teeth be decayed they should be seen to at once, and the skill of the dentist must be resorted to for supplying any that may be wanting. A man often dates his restoration to health from the time he had a set of false teeth.

Probably the best thing to drink is Vichy or Rosbach water, with a little whisky in it at meals. Malt liquors are, as a rule, to be avoided.

The tub in the morning, regular hours, sleeping on a mattress in a large airy room, and out-door exercise, are great adjuvants to treatment. We need hardly say that freedom from the cares and anxieties of business is very desirable; even should the vertigo prove to be not stomachal in origin, this preparatory treatment is likely to do good, and in the majority of cases it alone will effect a cure. Should anæmia be present, iron (Prs. 2, 3, or T. 15) is indicated.

In vertigo from mental anxiety or over-work, bromide of sodium (T. 19) often does a great deal of good. This remedy is also indicated in the giddiness occurring in women about the period of the change of life. When poor living and scanty food are the accompaniments of over-work, we gain more from measures directed to the improvement of nutrition. Generous living and a moderate allowance of a good full-bodied wine do more good than anything. In addition, Kepler extract with iodide of iron, ammonia and bark (Pr. 13), or quinine (T. 63) may be employed as adjuncts. In some instances very great benefit is derived from the syrup of hypophosphite of lime (Pr. 55), and from the tonic tabloids (T. 79).

When there are threatenings of paralysis, caution must be employed in taking stimulants, although we should certainly not advocate a lowering mode of treatment. We want to give tone to the system, and improve the general nutrition, and not to increase the debility. For the vertigo of old people nothing does better than cod-liver oil taken in tea-spoonful doses three times a day.

There are other remedies which are of use in special cases. Thus, we have sometimes obtained good results from the administration of tincture of gelsemium in five-drop doses in water, every three hours.

Sometimes ten drops will succeed when the smaller dose has failed. In vertigo accompanied by congestion of the face, belladonna (T. 9) often does a great deal of good. It is to be given when the giddiness is worse on movement but relieved in the open air. Heavy drooping eyelids, dimness of vision, and flashes of light before the eyes, are indications for its use, as are also a hot head and a sensation of burning in the eyeballs. The internal administration of belladonna may be accompanied by the application of a belladonna plaster over the region of the heart.

For Ménière's disease carefully syringing the ears with tepid water does good. Sometimes the application of a small blister behind the ear is attended with good results. A combination of belladonna and gelsemium may sometimes be given with advantage.

GIN-DRINKER'S LIVER (CIRRHOSIS OF THE LIVER).—The most frequent cause of this complaint is spirit-drinking. When alcohol is introduced into the stomach in the ordinary way, it nearly all passes through the liver. Undiluted spirits are much more injurious than when mixed with water, and produce greater irritation. Alcohol consumed as wine or beer is far less destructive to the liver than when taken in the form of ardent spirits. A hot climate intensifies all the vicious effects of alcohol.

The symptoms of cirrhosis of the liver are in the early stages often obscure, but later they are sufficiently well marked. At first the liver gets slightly enlarged, and the patient suffers from pain in the right side, indigestion, wind, and costive bowels. He is occasionally feverish, his skin is hot and dry, and he has a peculiar unhealthy sallow look, which he probably fails to notice, but which is sufficiently obvious to his friends. The necessity for making a change in his habits is forced upon his attention, and for a week or two he is under the doctor's orders, and not feeling able to drink any more, he consents to follow a restricted diet, and to take a course of purgatives. Soon the most prominent symptoms are relieved, he fancies himself well again, and quickly returns to his old habits. Gradually, however, he notices that he is getting thinner and weaker, and occasionally he has a good deal of pain in the side. He is nervous and out of sorts. He has no longer the pluck he used to have: first his friends notice it, and then he gradually becomes aware of it himself. He finds that he is not "fit for business," and he is afraid to see people. If a tradesman,

he no longer displays his old energy. He is anxious about his business, for it is falling off, and things don't work as well as they used to, and yet for the life of him he cannot pull himself together. Things go on like this for months and months, or even for a year or two. The patient has occasional attacks of diarrhoea, his appetite fails, his urine gets thick and scanty, and the emaciation and debility increase. He tries all kinds of treatment, but never sticks to one for long at a time. He consults everyone of any note in London, but derives little if any benefit from their advice. The majority of them express no opinion as to the nature of the complaint, but hint in a guarded way that he should take nothing but light claret. Finally, someone bolder than the rest tells him it is all drink, and that he will get better if he will only become more abstemious. The advice is considered an act of impertinence, and is promptly disregarded, although the patient feels in his heart of hearts that it is right. He would give up the drink if he could, but he can't. His self-reliance is gone, the alcohol has stolen away his will, and he is utterly incapable of giving up the dangerous fascination. He will take an oath to-day that he will never touch another drop of spirit, and will probably break it to-morrow. Sometimes he wishes that someone would lock him up in an asylum, or that by some chance or other he could have six months' imprisonment, but he never feels able to put himself under restraint. After a time the liver gets smaller, and this, instead of being a good sign, is a bad one, for it is contracting. The belly begins to swell, and gradually fills with a dropsical effusion. He now feels that he cannot get about any more, and has to take to his bed. Doctors come to see him, he has the best of advice, but they can do little or nothing for him. He would willingly enough consent to knock off drink now, but it is too late: the mischief is done, the liver is in a state of cirrhosis, and no medicine can restore it to its natural condition. The fluid in the belly gradually increases in quantity, and after some months of suffering the patient dies from exhaustion.

Is there any remedy for this horrible complaint? Yes, one, teetotalism—absolute abstinence from alcoholic liquors of all kinds. This remedy must be applied early. If you wait till your liver has undergone serious organic change, it is too late. No half-measures will suffice: you will have to give up drink of all kinds. Do this, and you will recover: go on on your old plan, and you will quickly die a painful and degrading death. If you feel that your will is so weak that you cannot be trusted, get your friends to put you in an institution for dipsomaniaes for a

month or two. It would probably save your life. There is never any danger in cutting off drink quite suddenly. For a day or two you will feel terribly depressed, but this will soon pass off. The craving for stimulants may often be allayed by some bitter infusion, say of gentian or cascarilla, containing three or four drops of tincture of *nux vomica* or ten drops of *sal volatile* or tincture of ginger to the dose. The perchloride of iron mixtures (Pr. 1 or 2) often serve this purpose better than anything.

Attention to the diet is also of importance. This ought to consist of such articles as milk, eggs, plainly-cooked white fish, meat, poultry, and game. Rich sweets and greasy dishes, as well as hot spices and indigestible foods of all kinds are strictly interdicted. Regular exercise in the open air and attention to the bowels are to be enjoined.

GOUT.—The phenomena which constitute gout are, we fear, only too familiar to many of our readers.

In many cases the first attack comes on without any previous warning, but sometimes it is preceded by some disorder of the stomach, such as diminished appetite, flatulence, heartburn, or nausea. As a rule, the patient who may have gone to bed and to sleep in his usual health, and without any suspicion of the sufferings in store for him, awakes about three in the morning with a severe pain in the foot, usually in the ball of the big toe. He attempts to get out of bed, but finds that he cannot put his foot to the ground, or if he succeeds in so doing, the act is accompanied with very great pain. On examining the affected joint, it is found to be hot, red, swollen, and exquisitely tender. The veins proceeding from the toe are turgid with blood, and the joint is stiff. The pain is so great that the weight of the bed-clothes is insupportable, and the mere vibration of the room causes discomfort. The pain is usually spoken of as being of a most agonising description. It is described as a grinding, crushing, wrenching pain, and is sometimes likened to a red-hot iron being suddenly thrust into the joint. The pain is attended with great restlessness, and the patient in his vain search for relief is perpetually shifting his foot from place to place, and from posture to posture.

There may be no constitutional disturbance, but usually the pain is ushered in by more or less cold shivering, followed by heat of skin, perspiration, thirst, loss of appetite, a white-furred tongue, and confined

bowels. The urine is small in quantity, high-coloured, and deposits on cooling a pinkish or reddish sediment.

If moderate precautions are taken, and the foot kept up on the bed or couch, the inflammation subsides in the early part of the day, but it usually gets worse towards evening, and for the greater part of the night the patient is kept awake by the pain, which, however, again subsides as morning advances.

In a few days relief is obtained, and the tension and swelling are diminished, as well as the heat and redness. The skin usually peels off in the neighbourhood of the joint, occasionally in flakes of considerable size, the process being attended with troublesome itching. The duration of the joint inflammation varies considerably in different cases, and is much influenced by the diet and mode of treatment adopted. Occasionally it lasts ten days, or even longer, but if care be taken it may usually be got rid of in from four to five days. After the attack is over, the patient not uncommonly feels all the better for it, and says it has done him good. He very frequently enjoys greater ease and alacrity in the functions both of body and mind than he had for a long time previously experienced.

This disorder which has thus departed almost inevitably returns. At first it may not recur oftener than once in every three or four years, but after a time the intervals get gradually shorter and shorter, till the attacks become annual, happening about the same time every year, and finally they return several times during the course of the autumn, winter, and spring. As the fits increase in frequency their duration becomes protracted, so that in an advanced state of the disease the patient is, with the exception of a few months in the summer, scarcely ever free from it.

As we have already said, the ball of the great toe is commonly selected as the first seat of the disease, but occasionally this joint escapes altogether. An old injury to a joint, as, for example, a stiff knee resulting from a fall from a horse, will attract gout to the damaged part, and will moreover cause it to linger there longer than in other localities. It is often said the gout differs from rheumatism in implicating the smaller joints of the body. This is true, if reference be made solely to the earlier attacks, but after a time the larger and smaller joints are indiscriminately affected. In severe cases there may be scarcely a joint which has not been attacked at some time or another. The hips and shoulders are the least liable to be attacked, but even they do not always escape. After the earlier attacks the joints soon recover their

former strength and pliancy, but when the disorder has recurred again and again, they are not so readily nor so completely restored to their previous condition, but remain weak and stiff, and sometimes they lose at length their capacity for motion altogether. It is a curious and at the same time a fortunate circumstance, that however active the inflammation may be, it never runs on to the formation of matter. The only exception to this is in cases where there has been a chalky deposit in the joint, and then the matter arises from the irritation caused by the presence of the foreign body, and is not directly owing to the gout.

As we have said, an attack of gout is sometimes ushered in by irritability of the stomach. In many gouty people, however, irritability of the temper is a more common symptom. You often hear a wife say of her gouty husband that she knows he is going to have one of his bad attacks, for "he has been like a bear with a sore head for the last day or two." Palpitation of the heart is experienced by some people on the eve of a gouty seizure, whilst others suffer from a kind of asthma. It is not uncommon to find some derangement of the bowels, and this may take the form either of diarrhoea or constipation.

The amount of fever, or in other words elevation of temperature, which accompanies the actual attack is always in direct proportion to the number of joints affected. It is always secondary, occurring as the result of the inflammation.

In old long-standing cases of gout, "chalk-stones" not unfrequently make their appearance around the joints. This chalk-like matter is deposited at first in a half-fluid state, resembling cream or soft mortar, and it then gradually becomes dry and hard. These concretions are not really composed of chalk, but of a substance known as urate of soda. It is often deposited around the knuckles, and it is said that people who are inclined to make the best of a bad job have been known to utilise their affected joints to chalk or score the game upon the table whilst playing cards. These chalky deposits not uncommonly cause such deformity of the hands that their natural shape is completely lost, and they are for all ordinary purposes of life practically useless. Sometimes the fingers are swollen to such an extent that they look for all the world like a bunch of carrots with their heads forwards, the nails taking the place of the stalks. When these deposits are seen, no doubt can ever exist as to the nature of the complaint from which the patient is suffering. Curiously enough, a little chalk-stone is not uncommonly

found on the ear just at the margin. In all doubtful cases of gout it is as well to examine this region, for if this deposit is detected, the nature of the complaint is clear.

There are several varieties of what is called "irregular" gout, and of these the most common is gout in the stomach. The attack usually commences in the ordinary way with inflammation of one of the joints, but the pain—which is never very intense—quickly and abruptly subsides, its disappearance being accompanied with disturbance of the stomach, usually indicated by sickness, vomiting, and pain or spasm of that organ. There is a very prevalent opinion that if a person be exposed to a chill or catch cold whilst suffering from gout, the disease is "liable to be driven inwards," and there is no doubt that under these circumstances very disagreeable, or even dangerous, symptoms may arise.

In certain rare cases, apoplexy, epilepsy, and mania have resulted from gout. Neuralgia and sciatica are far more common under these circumstances. Skin eruptions are very common in gouty people, and in many instances the skin and joint affection are suffered from alternately. Gravel and stone are also common; but, possibly as a set-off against this long string of evils, the gouty very rarely suffer from consumption.

There are few diseases which are more distinctly hereditary than gout. Its tendency to run in families must have been noticed by the most casual observer. It is certainly true, as regards this malady, that the sins of the fathers are visited upon the children to the third and fourth generation. It is said that gout frequently skips a generation, and that it more commonly attacks the grandchildren than the children. The explanation of this is in many cases sufficiently simple. Frequently the child of a very gouty father, having his bad example constantly before his eyes, would lead such an abstemious life as to keep the foe at bay; but the grandchildren, being fully under the hereditary influence, but not having the advantage of the "frightful example," take no special precautions, and very soon fall victims to their ever-watchful enemy.

Gout is almost exclusively a disease of the male sex. This exemption, or rather comparative exemption, is probably dependent more upon certain periodical functional peculiarities of the female sex than upon any essential difference in their mode of life. It has been frequently noticed that women who suffer from gout are robust, full-blooded, and of a masculine turn both of body and mind. Gout, when it does

occur in women, very rarely makes its appearance till after the age of forty-five.

Gout is rarely met with in either sex in people under thirty. To this rule there are, however, exceptions, for gout has been known to occur in boys of sixteen whilst at school. There can be but little doubt that in these cases a strongly inherited predisposition must have been fostered by a mode of life not of the most abstemious.

It has never been conclusively shown that what we call temperament exerts any special influence on the development of gout, but still there is a very general opinion that it most commonly attacks men of robust and large bodies, and of full and corpulent habits.

The disposition to gout may be engendered, and when inherited will be infallibly strengthened and developed by certain habits of life. Excessive indulgence in alcoholic beverages must rank first and foremost amongst the circumstances which are directly under the control of the individual. Distilled spirits, such as gin and whisky and brandy, have less tendency to induce gout than either wine or malt liquors. Among the labouring classes in London, gout is by no means uncommon, whilst in the corresponding class in Edinburgh and Glasgow it very rarely occurs. There can be but little doubt that the explanation is that amongst the former ale and porter are the popular beverages, whilst the latter confine their attention almost exclusively to whisky. In many of the large cities on the Continent, where the lighter kinds of claret form almost the sole alcoholic beverage, gout is very uncommon.

It is a well-known fact that excessive indulgence in food, more particularly in animal food, is very favourable to the production of gout. It has been noticed that those who live upon an exclusively vegetable diet hardly ever suffer from this disease. Sedentary and luxurious habits are favourable to its development.

Many people seem to imagine that it is a mark of distinction to have had the gout, something to be proud of and to boast about. This absurd notion evidently originated in the fact that it is essentially a disease of the upper and middle classes, and that it is peculiarly incidental to the wealthy and indolent. We sometimes hear of "poor man's gout," but this, in nine cases out of ten, means rheumatism. When we find a case of gout in any of our hospitals, the patient will generally prove to be a servant in a gentleman's family—people who are seldom total abstainers.

Brewers' draymen are not uncommonly attacked, and usually attribute their sufferings to the "smell of the beer." Gout is also fairly common

among the "ballasters" on the Thames, but as they often consume two or three gallons of porter daily the cause is not very far to seek.

Painters, plumbers, and others whose occupations expose them to the influence of lead and lead poisoning, often become the subjects of gout. It has even been found that the prolonged medical use of sugar of lead, as in cases of bleeding from the nose or stomach, or other part, may, in people of a gouty habit, occasion an attack.

A fit of gout may be brought on by various circumstances. An unusually severe debauch may act as the exciting cause. Depressing emotions, and over-fatigue, particularly when produced by too long a walk, may be followed by the same result. In fact, anything which depresses the general bodily health favours in a gouty subject the production of an attack.

The influence of climate and season on the production of gout is well marked. The complaint is far less prevalent in hot than in cold or temperate regions. A gouty individual may often escape his accustomed winter attacks by spending the colder months of the year in Egypt or Malta. The increased functional activity of the skin in hot climates is in all probability the cause of this exemption.

An acute attack of gout in one of the joints is probably never fatal, but when the disease becomes chronic it has an undoubted tendency to shorten life. The appearance of gout is always a serious matter, and should never, as some people seem to think, be regarded as a matter for congratulation. The earlier the age at which gout first makes its appearance, the more serious are a man's future prospects, particularly when the complaint is hereditary. The appearance of chalk-stones, even in the most trivial form, is an unfavourable sign.

Can gout be cured? We believe that if the patient will only take warning by his first attack, and make a thorough alteration in his habits and mode of living, the disease may be entirely eradicated from the system, and will never return. We know of no drug or combination of drugs which, unaided, is capable of effecting this result. The only real remedy, abstemiousness, is in the patient's own hands, and if he refuses to use it, it is his own look-out.

What should be done in an attack of acute gout? In the first place, the patient must be kept in a warm room, as quiet as possible, and should on no account be allowed to make any attempt to get about. The diet must be of the simplest possible description, but milk, arrow-root, tapioca, sago, biscuits, toast, toast-and-water, and other similar articles may be taken without restriction. The affected member should

be wrapped in flannel, and should be kept strictly in the horizontal position, never being allowed to hang down or support its own weight.

When the pain is very severe, contractile collodion, which may be advantageously mixed with a little tincture of iodine, painted over the inflamed joint, will speedily give relief, although at first the pain may be temporarily increased. Care must be taken not to apply too many coats of the collodion, or the contraction produced may be too great, and it may do more harm than good.

Colchicum is undoubtedly the best internal remedy both for acute and chronic gout. Twenty drops of colchicum wine given in a little water will often remove the severest pain in the course of an hour or two. By some the administration of a drop of colchicum wine every twenty, thirty, or sixty minutes is preferred, but these smaller doses take much longer before they produce the desired effect. When there is much acidity of the stomach, the colchicum may be advantageously given with a little carbonate of potash or other simple alkali. In all cases in which the bowels are confined a free evacuation should be obtained. A compound colocynth pill (Pr. 60), or a seidlitz powder, or the white mixture (Pr. 25), will usually answer admirably. Mercury and its compounds should be given with considerable caution to gouty people, as in them it often produces very unpleasant effects. The hot air or vapour bath may prove useful in promoting the action of the skin.

In chronic as in acute gout, the remedy on which we place the greatest reliance is colchicum. The action of this drug in curing gout is as marked as that of quinine in curing ague. Some people appear to have an unfounded prejudice against the use of colchicum; if judiciously administered it can never by any chance do harm. It must always be borne in mind, however, that colchicum is merely palliative, relieving for a time the patient's sufferings, but in no way protecting him from a recurrence of his attacks. Some people say that colchicum whilst it cures one attack hastens the return of another, but we believe that there is no truth in this statement. In chronic cases twenty drops of colchicum wine may be given in water every four hours until relief is obtained.

In old-standing cases where colchicum has not succeeded so well as might be wished, a tea-spoonful of the ammoniated tincture of guaiacum given three times a day in a little milk may prove useful.

When the pain is distinctly worse at night, or is experienced only at that time, the colchicum wine may be administered in combination

with iodide of potassium (T. 47). Iodine liniment painted over and around a joint swollen from gouty inflammation will often do good.

In China, oil of peppermint is used as a local application, and the relief is said to be almost instantaneous. The application of menthol is useful, and benefit is often derived from gently rubbing the affected joints with Chatteris oil.

A cold wet linen compress, constantly applied and frequently renewed, will do much to relieve a painful joint.

The Turkish bath is particularly valuable in chronic gout, but, as might be expected, it is not always equally serviceable. In long-standing cases, where the attacks have occurred so frequently as to distort the joints by deposits, and the patient is, perhaps, liable to repeated relapses, and is scarcely ever free from pain, the efficacy of the bath, though striking, is less apparent than in milder and more tractable forms. Massage is useful if properly administered. It must be the true massotherapeutical treatment, and not what is commonly called massage.

Of late years lithia has been extensively used for the removal of the chalky deposits, particularly when the skin is broken. The urate of soda, of which they are composed, is readily dissolved by carbonate of lithia, and if a solution of this salt of the strength of five grains to the ounce of water be employed, they may in time be removed. The affected joints must be constantly enveloped in lint or rag kept moist with the solution. In many cases this method of treatment has proved very successful, and not only have considerable enlargements been removed, but suppleness and even free movement have been restored to previously stiff and useless joints. The treatment is necessarily somewhat tedious, and many weeks, or even months, may be required to remove large deposits. The local application may be supplemented by the internal administration three times a day of five grains of carbonate of lithia dissolved in any aerated water, or the citrate of lithia may be given in the same or larger doses. The lithia tabloids (T. 52) will be found useful.

We must now consider the treatment which should be adopted by gouty patients in the intervals between their attacks. A few general rules will be given, and they will be found more especially applicable to those who suffer from chronic gout.

A good plain solid diet should be adopted, but care should be taken to avoid excessive indulgence in animal food. It is hardly necessary to say that the patient should never eat anything which he knows

disagrees with him, or causes unpleasant symptoms of any kind. As a rule, what are called "made dishes," and all rich and highly-spiced food, should be tabooed. Pork and veal, and all salted or potted meats are more or less indigestible, and must be regarded with suspicion. Beef and mutton, white fish, fowl, and game, are nearly always admissible, so that the patient is in no danger of starvation.

There should be a due admixture of animal and vegetable food; and potatoes, greens, peas, beans, and the like, may be taken with advantage. The softer kinds of fruit, such as strawberries, grapes, oranges, and baked or stewed apples and pears, will, if taken in moderation, do no harm, but plums and other stone-fruit should, when uncooked, be avoided.

Sugar and sweets of all kinds lead to the production of acidity, and favour the development of gout.

A tumblerful of effervescing lithia water or of Rosbach water, in which two of the lithia tabloids have been dissolved, should be taken daily two hours after breakfast.

As to beverages, tea, coffee, and cocoa are in most cases admissible. Young people can usually get along very well without stimulants of any kind, and we should strongly advise any person in whom gout makes its appearance at an early age to become a total abstainer. In the case of old people with health broken by disease and long suffering, a certain amount of alcohol is necessary. All malt liquors are to be eschewed. The wines to be most carefully avoided by the gouty are port, sherry, and madeira. Sherry, however dry and pure, is by no means the innocent beverage, as far as the production of gout is concerned, that some people seem to imagine. The best wine to take is a good sound claret, free from sugar and without acidity.

Probably the best drink for a gouty patient is brandy, taken in strictly limited quantities, and freely diluted with water. Whisky, hollands, or gin, may in some cases be substituted, but the change should be made with a certain amount of caution. The spirit-and-water should be taken solely at meal-times. The quantity consumed in the course of the day will vary in different cases from one to three fluid ounces, the exact amount being dependent to some extent upon the previous habits of the patient.

Exercise should be regularly and habitually taken, and walking may be advantageously combined with riding. Excessive fatigue always does far more harm than good, and should be guarded against.

Early and regular hours are of much importance, as is the avoidance

of all severe mental application. The importance of plenty of fresh air in maintaining health and warding off attacks cannot be over-estimated. Removal to a warm, dry climate during the colder months of the year will in many cases enable the patient to escape his autumn and winter attacks.

It is extremely difficult to lay down any general rules for the treatment of the irregular forms of gout, such for instance as gout in the stomach. The attendance of a medical man will, in all these cases, be found necessary. The administration of colchicum wine is usually advisable in the irregular as in the more orthodox forms of gout.

GRAVEL.—A patient is said to suffer from gravel when he passes solid matter with his urine, whether in the form of powder, grit, or sand. The term is not applied to those cases in which the water is clear when recently voided and still warm, but throws down a powdery sediment as it cools, which sediment redissolves on warming the urine before the fire or in any other way that may be convenient. There are several different kinds of gravel, but in the large majority of cases the deposit consists of uric acid, which is thrown down in the form of red or yellow sand. If carefully examined this deposit will be found to consist of little crystals, resembling in shape, size, and colour Cayenne pepper. The urine is, at the same time, bright and of a dark golden or coppery colour, like brown sherry. Sometimes it feels hot and almost scalding as it is being passed. It is more acid than perfectly natural urine, and turns blue litmus paper a bright red colour. Often enough the quantity passed is below the average, and the specific gravity or density will be found to be higher than natural. This deposit must not be confounded with the pale pink sediment so often seen at the bottom of the utensil on a cold winter's morning. That is never deposited until the urine has had time to cool, and is immediately redissolved when the urine is warmed up to about the temperature of the body. True gravel cannot be made to disappear in this way. Moreover, the latter does not render the whole of the urine turbid when shaken, but rolls over at the bottom when the vessel is slowly tilted so as not to trouble the general transparency of the water. With a little care no difficulty will be experienced in distinguishing true from false gravel.

There is no doubt that a tendency to the formation of gravel is hereditary. This hereditary tendency varies in force or strength in different families. Some people begin to pass gravel at thirty or sooner, others at forty, and again others not till they are sixty. As a rule, the

earlier the age at which it makes its appearance, the stronger is the hereditary predisposition, and the more difficult will it be, in all probability, to effect a cure. There is a curious relationship between gravel and gout. Sometimes these two complaints seem to alternate, comparing one generation with another; thus, gout appears in the one, gravel in the second, gout again in the third, and so on. And the same individual may have alternate attacks of gout and gravel, and this is by no means uncommon. The majority of people who suffer from this condition live an indolent and luxurious, if not an intemperate life. Adults are peculiarly obnoxious to it after the age of forty. They are usually in addition troubled with transient twinging pains in their limbs, and often during an "attack of gravel" suffer from pain in the back and a general sense of discomfort. Some people pass gravel daily and habitually, whilst others do so only every few weeks, but then in considerable quantity. These attacks occur at varying intervals, and usually increase in frequency and severity unless treatment is resorted to.

The presence of gravel in the urine is not to be regarded as an indication of kidney disease. In the vast majority of cases it means simply that the liver is inactive. It fails to perform its duty as an excreting organ, and the result is that an extra amount of work is thrown on the kidneys. In the case of people who suffer from gravel it will usually be found that the bowels are sluggish, that the appetite is impaired, and the digestion is performed imperfectly. These may not be very prominent symptoms, especially if the diet be carefully selected, and the patient is able to take plenty of exercise and pass most of his time in the open air, but still they are always present more or less.

It is obvious from what we have said that our treatment should be directed rather to the liver than to the kidneys. A most valuable drug in these cases is blue-pill (T. 16). But still it must be remembered that gravel is essentially a chronic complaint, and one cannot indulge in blue-pill to an unlimited extent. We have consequently to look round for some drug or combination of drugs that will prove equally efficacious, but will be less likely to act injuriously on the system if continued for a considerable time. We find what we require in certain natural mineral waters, such as the Franz Josef, Friedrichshall, and Pullna, and of these the first is usually preferred, on the grounds that it does not purge too freely, that it does not gripe, and that it is not very disagreeable to take. The dose of Friedrichshall water is about half a tumblerful, and it should not be taken pure, but diluted with

from a third to half of its bulk of hot water. A great advantage is that it may be taken for many weeks without losing its effect. It should be taken in the early morning, say an hour or so before breakfast; and then, after the cup or two of hot tea or coffee accompanying that meal, there is usually a full, free action of the bowels. Some people prefer the Marienbad water, which contains enough free carbonic acid to make it an agreeable and slightly sparkling draught. Rather more than half a pint is required to produce an easy motion. The waters both of Vichy and Vals have attained a high position in the treatment both of gout and gravel. By many it is maintained that their action on the liver is slight, and that although patients are often better for a time after a visit to Vichy, they are not permanently benefited. There is no occasion to drink the waters at the spa, for the majority of them are imported, and may be obtained without difficulty. The course should extend over a period of from six to nine weeks. It may be said that this is an expensive mode of treatment; but it must be remembered that gout and gravel are essentially the heritage of the rich and well-to-do, and not of the poorer classes. The artificial imitations of the natural waters are of comparatively little value.

In addition to medicinal treatment the diet must be carefully regulated. In the first place, alcohol must be taken very moderately, and the lighter wines are to be preferred. Port, sherry, and champagne are unsuitable, and beer is absolutely forbidden. Probably the best drink for the sufferer from gravel is a light, sound Bordeaux, or a Rhine wine of similar quality. Sugar is strictly tabooed, and fat, butter, cream, and pastry are to be taken, if at all, very sparingly. Abstinence from those articles of diet will greatly lighten the work of the liver, and lessen the unnatural strain thrown on the kidneys. In some kinds of gravel, rhubarb, from the amount of oxalate of lime it contains, is especially injurious.

In many cases great benefit is derived from the simple expedient of taking a tumbler of Rosbach water a couple of hours or so before dinner, and another on retiring to rest. It is found, too, as the result of practical experience, that a long interval should not elapse between meals, and that the period devoted to sleep should not be too prolonged. Many people suffering from gravel take a little bicarbonate or citrate of potash in a tumbler of water every night at bed-time and again on rising in the morning. This is simply a temporary expedient, and seldom does any permanent good. The great thing is to pay strict attention to the diet. The following case forcibly illustrates

the effects of good living on the production of gravel:—"A Dutch merchant had an ample fortune, and lived in accordance with his means, keeping a good table, and indulging in its pleasures freely. He was at this time tormented with gout and gravel. Unexpectedly he lost all his fortune, through a political crisis, and was obliged to take refuge in England, where he lived more than a year, almost in poverty, amid numerous privations, but his gout completely disappeared. Little by little he succeeded in repairing his affairs; he resumed his old mode of life, and the gravel was not long in reappearing. A second reverse robbed him in a short time of all he had gained; he passed into France almost without resources, and his regimen was consonant with his means; the gravel disappeared. Once again his industry restored him to a life of plenty and ease, and he abandoned himself again to the indulgences of the table, and with them appeared once more his old enemy, the gravel."

HAY FEVER—HAY ASTHMA.—This is a peculiar form of catarrh, or asthma, produced by the inhalation of the pollen of some kinds of plants, and especially grasses. It affects certain persons only, and in them it always comes on at the same time of the year—at the latter end of May, or in June, when the grass is in blossom, or when the vernal haymaking is going on. The disorder happens only at the one particular season, and the persons so attacked may not be particularly subject to catarrh at other times, or from ordinary causes. Usually there is headache, which is often severe, together with suffusion of the eyes, sneezing, irritation of the nose and back of the throat, and a dry, harassing cough. Then, at intervals there may be experienced attacks of asthma, lasting for two or three hours, the shortness of breathing being sometimes so urgent that the patient experiences the most distressing sensations of impending suffocation. First attacks of hay fever are generally milder and less persistent than the subsequent ones, the susceptibility apparently increasing year by year. In the early stages sneezing and running from the eyes and nose are the prominent symptoms, but subsequently the asthmatic element is superadded. If the affection be left to itself the duration is usually from three to five weeks, and even in cases most carefully treated the attack may last for a month. Persons who have once suffered, invariably have a return of it if exposed in ever so slight a degree to the exciting cause. The air wafted from Hampstead to central London will, in the haymaking

season, often produce the habitual seizure. So exquisitely sensitive to the action of the pollen of grass are some people that the slightest exposure will induce an attack. A lady who suffered annually from this affection stated that a paroxysm was sometimes brought on by the approach of her children after they had been in a hay-field, and on one occasion this happened when the hay-harvest was over, upon their joining her at tea, after playing in a barn in which the hay of that year had been stored.

It is a curious circumstance that hay fever should be almost exclusively confined to the educated classes, but so it is. As an American writer humorously remarks:—"The complaint is not met with in the *plebs*, the *commune vulgus*, the *oi polloi*, but is patrician and aristocratic, and occurs mainly amongst those high in rank and social position, and eminent for mental and literary attainments. William IV. of England, an English duke, Southey the poet, several learned divines, lawyers, medical men, and their wives, ex-mayors (!), bankers, and ladies of fashion are among the select few on whom it bestows its favours. The great Daniel Webster secluded himself every autumn at Marshfield to get through his season of trial, with what patience he could muster; and the distinguished Henry Ward Beecher annually vacates his pulpit for a season from the same cause: and certainly, if ever a clergyman had a good excuse for so doing it is he. Preaching even such as his would fail in its effects if interrupted at intervals by a succession of sonorous sneezes, paroxysms of cough, and asthmatic utterance, and a persistent aspersion of eyes and nostrils." It would seem probable that the condition of the nervous system engendered by mental training is especially favourable to the development of hay asthma. Farmers, who are of necessity constantly exposed to the influence of pollen, rarely suffer from it. It is difficult to account for this immunity; by some it has been supposed that it is owing to the absence of the predisposition which mental culture induces, whilst others think that they are rendered insusceptible to the action of grasses by their constant exposure to its influence. However that may be, there is no doubt that an attack of hay asthma is a great trial of faith and patience, religion and philosophy, and enough at times, as someone once said, "to make a man curse his mother and turn Turk," if that be the *ultima thule* of human turpitude. The man who could bear with equanimity the annoyances of hay fever would rival the fortitude of Guatimozin himself, who, when stretched upon live coals by his brutal conquerors, rebuked the complainings of his fellow-sufferer

by gently reminding him that "he, too, was not upon a bed of roses." The first attack often begins in childhood, and rarely occurs late in life. The complaint appears to be more frequent in men than in women, and there is reason to believe that the susceptibility to this troublesome affection runs in families. It is probably more common in this than in any other country. An analogous disorder prevails in some parts of the United States, where the rose is largely cultivated, and is known as "rose fever" or "rose catarrh." "Peach cold" is an affection of similar nature.

In many people an attack closely resembling that of hay fever is produced by dust in any form. A patient says:—"If in my walks I see men sweeping a street, and clouds of dust arising, I shun it as I would a rattlesnake; and if I see a building in process of demolition, I go half a mile out of the way to avoid it. I always walk on the shady side of the street if there be one, and select a well-watered street if possible, or keep well to windward. I cannot express the agony I have on certain occasions suffered from this cause, and I therefore confine myself within doors as much as possible. Dusts and draughts are my particular aversions. I cannot smell a rose or eat a peach unpeeled—the hairs irritate my fauces—without suffering an attack, and a pinch of snuff would I believe make me sneeze my head off. Nothing that I have ever snuffed up my nostrils has failed to injure me." In conclusion he adds, "I pray for rain with all the fervour of the old Scotch clergyman, without caring whether or not it should eventuate in a deluge."

An attack of hay fever may usually be cut short by removal from the exciting cause. A sojourn at the seaside will palliate, and, for the time, often cure the complaint; but it is not every seaside district that gives the hay fever patient relief. A seaside town deeply indented in the land is not a good place to choose, for it partakes more or less of the character of a bay. One should rather look out for some place situated on a promontory or peninsula, so that there is very little chance of hay-fields being in the neighbourhood. But wherever a patient may be at the seaside, if the wind is blowing from the land, and if hay-grass is in flower at the time, he will be liable to be attacked by his enemy. It is therefore a matter of importance in selecting a retreat for the hay season to find some place where the prevailing winds are from the sea. It is also better to choose a spot where the sufferer can be continually near the water, and if possible a place where the shore is backed with high cliffs, because these act as a

kind of screen when a land breeze is blowing. There are several places in this country which are recommended as being suitable for the residence of the hay-asthmatic during the summer months. First and foremost among these is Lundy Island, near Ilfracombe, in the Bristol Channel. Then there are Lizard Point in Cornwall, the point of land near St. Mawes, and the point of land near her Majesty's residence at Osborne. Some parts of the Isle of Man, such, for instance, as the district a little beyond Port St. Mary or Port Erin, would prove suitable. On the Welsh coast the district near St. David's Head is recommended. There are also some of the small islands off the west coast of Scotland which would give complete protection from attacks of hay fever. In America the great place of resort is Fire Island. This island is about twenty miles long by three-quarters broad, and is situated on the Atlantic side of Long Island; on one side a bay (the great South Bay) separates it from Long Island, and on the other is the broad Atlantic. Scarcely anything but a coarse, short grass grows there, and this is rarely seen in flower in any quantity.

A cruise in a yacht is almost a specific for hay fever, for it removes the sufferer from the cause of his suffering. Many noblemen and gentlemen of wealth who are afflicted with hay fever, take to their yachts early every summer, and remain afloat till the hay is all in, and they thus escape the complaint altogether. Unfortunately the majority of people can afford neither the time nor the money to avail themselves of this mode of obtaining relief, but even a day or two's cruise will do good, provided always the vessel keeps well out from shore. Many of the steamship companies now take passengers for round trips at remarkably reasonable rates. For example, you can go from London to Malaga and back for fifteen guineas, everything included. Other lines take passengers to Norway or to the Baltic and back on very moderate terms. The boats of the Messageries Maritimes sail from Marseilles for the Levant and Syria and for Constantinople at frequent intervals and afford excellent accommodation. The route selected by the sufferer will depend partly on the time of the year and partly on the length of the holiday which can be taken. The dates of sailings are usually advertised in the Continental Bradshaw, and full particulars may be obtained either from one of the tourists' agencies or by writing to the offices of the various companies. It is only of late years that these exceptional opportunities have been opened up to travellers in search of health. In long voyages there is one point which is worth bearing in mind. Cattle and sheep are often taken on board

ship, and, of course, require to be fed. In most cases the food consists largely of dried hay. In this way the hay-asthmatic may be thrown in contact with pollen, and have his complaint developed.

For those who cannot get to the sea the next best thing is to go to the centre of a large town, the larger and the more densely populated the better. It is a good plan, too, to keep in-doors as much as possible during the middle of the day. High mountain lands used only for grazing purposes will also be found good for hay fever patients, although by no means equal to a well-chosen seaside residence. Some parts of the Highlands of Scotland, as well as some of the mountainous districts in Wales, will be found to answer well.

When one cannot get away from home, the only thing is to trust to medicinal agents. One of these—tobacco—hardly merits that name: but for all that it is of all probably the most trustworthy. There is nothing during a paroxysm of hay asthma that has anything like the effect of smoking tobacco, and although this is especially the case in the later stage of the attack, when the asthmatic element is most developed, still, in the earlier stage, when the sneezing and running from the eyes and nose are prominent symptoms, tobacco-smoking exerts a very marked influence as a sedative. During the hay asthma season—that is, in the majority of cases, from about the 15th of May to the 10th or 12th of July—the sufferer should regularly smoke a cigar the last thing before going to bed, or, better still, when in bed. This night cigar is taken as a preventive. Tobacco will cure the asthmatic spasm when it is fairly on, but it requires a larger dose, and it must be taken in a stronger form. The sedative influence of the cigar will usually ensure a fair night's rest; but the powerful depression of strong shag tobacco is usually necessary to cut short the spasm when thoroughly established. Even when the night cigar is taken it may be necessary to get up about three or four in the morning and light another, and during the last fortnight in June, this happens with many almost nightly. A hay asthmatic should never smoke tobacco but for his malady. One soon gets accustomed to its influence, and it then loses its power of relaxing spasm. Distressing as are the sensations of collapse from tobacco-poisoning, they are unspeakable relief when contrasted with the sense of impending suffocation from asthma. A patient, in describing his feelings, says:—"I smoked one pipe, then another; and as my face blanched, and my pulse failed, and the cold sweat stood on my forehead, miserable as were the sensations of collapse they were paradise to the agonies of suffocation. I shall never forget those

moments of relief." Many people who have been accustomed to smoke for years are not readily susceptible to the influence of tobacco, and they fail to obtain much benefit from its use unless they employ some device to secure its more potent effect. A good plan is the following:—"Fill the mouth with tobacco-smoke, and then instead of blowing it out again at once as in ordinary smoking, retain it in the mouth for some seconds, perhaps a quarter of a minute, then take another mouthful and retain that, and so on. In this way the tobacco is more rapidly absorbed, and a state of depression quickly produced.

In many cases great benefit has been derived from taking ten drops of the tincture of *nux vomica* in half a tumbler of water three times a day.

Another good remedy is from three to five drops of arsenic solution (the *liquor arsenicalis* of the *Pharmacopœia*) in a little water three times a day. This is the dose for an adult, and should not be exceeded. It should be taken after meals, and is then less likely to upset the stomach.

Tincture of *lobelia* may be given during the asthmatic paroxysm with a fair chance of success. On any signs of an on-coming fit, ten drops of the simple tincture should be taken in water every ten minutes or a quarter of an hour, till relief is obtained. Sometimes it produces a little sickness or faintness, but this soon passes off.

A few drops of chloroform placed in the palm of the hand and inhaled during the attack will often cut it short. As a matter of precaution someone else should be in the room when this treatment is adopted.

In many cases of hay fever creasote inhalations have proved of service. The best strength is ten drops of creasote to a pint of hot water, the steam being inhaled.

Sometimes a camphor inhalation does good. Ten drops of spirits of camphor, and twenty of rectified spirits are to be added to the pint of hot water.

In many obstinate cases much benefit is derived from gently snuffing a two per cent. solution of cocaine up the nostrils.

The inhalation of pure terebene or of pinol often answers admirably. The vaporoles of pure terebene (V. 10), Pinol (V. 11), Juniper (V. 9), Cubebæ and lemon (V. 7), and eucalyptia (V. 12) are all worth a trial.

The "menthol pocket inhaler" is a useful little instrument, whilst the "pinol-eucalyptia dry inhaler" is an established favourite.

Many patients find it convenient to use the "Vereker Chloride of

Ammonium Inhaler" three or four times a day. One or more of the vaporoles may be crushed and put in the water of the wash-bottle.

Quinine, by acting as a tonic to the mucous membrane, often does good. If the patient has no difficulty in taking the drug it may be given in five-grain doses (T. 64) two or three times a day. If the patient is intolerant of its action two grains (T. 63) three times a day may suffice.

Many people when exposed to dust find it a good plan to stop the nostrils with a little plug of cotton wool.

HEADACHE.—Headache is of necessity of common occurrence, since it is present as a prominent symptom in some part of the progress of most acute and many chronic illnesses. It would seem that the head is more given to aching than any other part of the body; put all the breast pains, stomach pains, and colic pains together, and you do not make such an aggregate of suffering as is furnished by headache.

There is no doubt that headache is a more common complaint than it used to be, and the explanation of this is not far to seek. The most prevalent diseases of the present day are those affecting the nervous system. The strain to which we are all of us more or less subjected through the requirements of modern times renders us especially liable to break down prematurely from over-work and want of rest. Every branch of study is now pushed forward with a vigour unknown to our ancestors, and boys and girls are required to grapple with abstruse questions which a few years ago occupied the attention only of the advanced student or the man of science. Before civilisation had arrived at its present state of perfection the over-wrought brain was confined to philosophers and the laborious scholar in his solitary contemplation of human knowledge. Nervous exhaustion was not the common disease it now is, and physicians were for the most part silent as to the cause of its production. In whatever direction a man now turns, he is sure to find competitors striving for the same prize as himself. In trade, in commerce, in literature, and in art it is ever the same: no man has the field to himself. The busy professional man probably affords the most striking example of over-strained exertion. He must strain every nerve to attain the special object he has in view, and dare not leave it till he has probed it to the minutest detail. Should he quit the field failing to discover some new stratum, he is soon followed by another who digs up the hidden treasure, which gives a name or builds up a future.

Headache often depends not only on mere functional but on organic disease of the brain. Such disease may exist for a long time without giving rise to pain, provided only that its progress be slow. Although there may be paroxysmal exacerbations, a certain degree of constancy characterises this more than any other form of headache. The patient goes to sleep with it: it haunts his dreams, and he wakes up with it. Every movement of the body aggravates it, and the agreeable excitement which will dissipate many headaches often only makes his worse. The pain may be sharp or dull, lancinating or throbbing. It is generally accompanied by giddiness, occasionally by fits of vomiting, sometimes by confusion of mind, and frequently by rumbling noises or murmurs in the ears. There is nothing peculiar in the seat of the pain, but when it is more or less continuous and always referred to one particular spot, there is reason to fear some serious disease.

Plethoric or congestive headache is dependent on an excessive flow of blood to the brain. There is usually a sense of pulsation in the ears, together with giddiness on stooping. This variety affects chiefly robust middle-aged men who are making blood too fast; but it is also met with in plethoric women with menstrual irregularity. Persons who live too freely, take but little exercise, and rise late in the morning are often subject to it. In many cases it follows the congestion produced by mental emotion or excitement. The flush of the face and neck is a pretty accurate representation of what must be the condition of the vessels of the brain. Perhaps the circumstances most favourable to the production of this form of congestion are when passion and intellectual exertion are combined, as in the case of an orator in the full torrent of invective fury. We find an example of this in the vivid sketch of "Preparing for the House" in the "Diary of a Late Physician," where the stout country squire with a rubicund face is in a condition of great excitement at the prospect of delivering a speech that will at once defeat his assailants and establish his reputation as a politician. Strong intellectual application may induce sufficient congestion to leave its traces for many hours in those who are either plethoric or have an irritable circulation; and when this is being incessantly repeated, as in the case of over-ambitious students, or in persons under the discharge of some inevitable duty, it may ultimately reduce the intellect considerably below its former level. The counteraction of this congestion is often attempted by means of violent exercise. With a man full-blooded, full-fed, and of active digestion it answers well—the equilibrium of the circulation is maintained, together with the due eliminative action of

the kidneys and bowels: but in the case of the pale weakly student, the best part of whose life is in his brain, it seldom succeeds, for no sooner is the congestive headache cured than it is replaced by the headache of exhaustion.

The headache resulting from intoxication might at first sight appear to be a congestive headache, since there can be no question that in that condition the vessels are abnormally full; but the fact is, that the retributive headache comes on only after the debauch is over, and it is probably of a composite character. The disordered function of the brain so wantonly tampered with, and the derangement of the liver and stomach, are probably more or less important factors in its production.

A congestive headache not of the active nature we have just been considering is often met with, and is known as the headache of "brain-fag." It frequently results from long-continued, persevering, over-action of the brain, whether by the enthusiastic incautious student or the over-tasked professional man. It is caused by the want of adequate rest, mental activity never ceasing for a sufficient length of time to allow the brain to return to its normal condition in repose and recreation. This headache is usually of a dull heavy character, and is most commonly situated in the neighbourhood of the forehead. It is often accompanied by a feeling of incapacity, and by that dejection of spirits that can hardly fail to accompany such feeling. But without any excessive intellectual strain, this form of headache often arises from mere continued anxiety, such as may be observed in some member of a family on whom devolves the chief responsibility of its guidance. Attention always on the alert, the necessity for provision against contingencies, the vexation of disappointed plans, the difficulties incident to domestic, as well as every form of government, the necessary employment of incapable, unwilling, or impracticable agents—such a life soon engenders this form of headache.

The true active plethoric headache is unquestionably less frequent nowadays than it used to be. The exciting lives in business and dissipation, the wear and tear of the nervous system, the railway travelling, the sparseness, refinement, and delicacy of the dietary, sufficiently distinguish the lives of public and professional men from the sleepy squire, the plump pluralist, and the festive alderman of days gone by.

Another variety of headache is known as the nervous headache, and it not unfrequently afflicts an individual at intervals through a long

life. It belongs to all classes of society, attacking the rich luxurious lady amid the distractions of society, and the poor hard-worked sempstress in the solitude of her garret. It, like many other nervous affections, is a product of civilisation, and is almost unknown among savage races. The subjects of this disorder have an instinctive feeling that it is nervous, and can usually distinguish it from other kinds of headache. They recognise its approach, and succumb to it almost without an effort, and then when it is over they rebound as if nothing had happened. The duration varies: with most it continues till after a sound sleep, and in many, or in the same person occasionally, it will prevent sleep for one or two nights. It varies in degree: sometimes it is dull and heavy, admitting the subject of it to pursue the usual avocations of the day, though under discomfort, but more frequently it is so acute as to make any occupation an additional suffering. The seat varies in different persons, and in the same persons at different times, according to the exciting cause. It may occupy the front of the head, one temple, the crown, the back of the head, or one side. It belongs to all temperaments and habits of body, but it occurs most frequently in persons of nervous diathesis, and in those with frames weak by organisation or exhausted by disease and other causes. The original constitution most prone to this form of headache is that in which nervous susceptibility is well marked. Those of lively emotions, delicate sensibility, and easily perturbed mind are frequent sufferers, and it prevails largely amongst those who have the æsthetical and imaginative elements highly developed. It is the frequent accompaniment and curse of great intellectual endowment, and it would appear that the liability to it is most marked when the functional activity of the brain, whether in perception, emotion, or intellect, is disproportionate to the organic vigour of the rest of the body.

The condition which, irrespective of original constitution, is most favourable to the production of nervous headache may be described as one of debility. In the studious, this predisposition is the result of the consumption of nervous force in the brain, combined with neglect of the ordinary laws of health; and the same may be said of those who over-exert themselves in professional work, in diplomacy, commercial speculation, or what not. In the rich and well-to-do there is often loss of tone engendered by late hours, hot rooms, want of exercise, emotional excitement, the increasing torment of jealousy and ambition, and worse than all, the forced effort to appear gay in spite of *ennui*, worry, and disappointment. The operative classes are not exempt from it, for their

social surroundings are often of the most unfavourable description, and their frames are weakened by hardship and privation. Often enough it arises from debility, ensuing on loss of blood or its deterioration, on excessive discharges, and on vicious habits and indulgences. The pale anæmic girl, the mother worn out by repeated pregnancies and prolonged suckling, the father blanched from piles, and the son exhausted with vice—all suffer from this headache. Many of the exciting causes clearly show the nervous origin of the affection. In one it is produced by a prolonged fit of study, or a difficult arithmetical calculation, in a second by a dazzling light, a loud and grating noise, or a disagreeable odour, whilst in others it results from an attack of indigestion, or from long abstinence from food. Curiously enough, it may sometimes be induced by certain atmospheric conditions, notably by that which precedes and accompanies thunder, and by that which ushers in a fall of snow. Sometimes it results from apparently the most trivial causes. The case is recorded of a lady who could at any time induce a fit of headache by turning her head suddenly to the right side, and in another instance it was always brought on by lying on the back.

Of all the exciting causes of nervous headache probably fatigue in some form or other is the most common. Too long a walk, sitting up beyond the usual hour for retiring to rest, compulsory mental effort, whether in the course of conversation, or in study or business, the exhaustion following the excitement of a long journey, or of an evening party, may all act as exciting causes, especially if the fatigue and debility are from any cause associated with circumstances producing perturbing or depressing emotions. Excessive muscular exercise will often act in the same way. In delicate women subject to this headache, it often comes on before, and lasts during the whole of each menstrual period, although there may be nothing abnormal or unhealthy in the function.

In addition to the varieties we have described there are many other forms of headache of more or less frequent occurrence. In what is known as “sympathetic” headache, irritation proceeds at a distance from the nervous centre, as in decayed teeth, arrested digestion, or some disorder of the womb. The case is related of a gentleman who had suffered from pain in the right side of his head for three or four months. It was sometimes acute, at others dull, and it had come on without any assignable reason. A great variety of remedial measures had been tried, including blisters, tonics, regulation of diet, change of air and scene, and so on, but without success. As a last resource he had

been advised to seek relief at one of the German spas, but, fortunately for him, before setting out he had his teeth examined. They were all in wonderfully fine condition except the wisdom-tooth in the upper jaw on the right side, which was decayed. This was extracted, and from that moment the patient was cured. This is an exceptional case, but it is a remarkable instance of sympathetic headache. A more familiar example is the pain in the head which, with many people, supervenes on taking ice into the stomach. Headache is sometimes produced by the presence of some special poison in the blood. The headache occurring in typhoid fever is probably the most decided instance of this variety: the poison in this case being the poison of the fever. In the same category must be placed the headache of rheumatism, gout, ague, and some other affections.

Megrim, sick-headache, blind-headache, or bilious-headache, as it is called, is of such importance that it merits a separate consideration. (*See MEGRIM.*)

Speaking of headaches generally, it may be said that in the large majority of cases they are induced by excessive brain-work, combined with a deficiency of bodily exercise, short restless nights, and insufficient sleep. Excessive brain-work does not mean exclusively work of an intellectual kind, as in close application to study or literary composition, or to the business of chambers or the counting-house, but it also includes that strain of the affective or emotional part of our nature which is the result of prolonged mental anxiety, vexation, and disappointment, and is far more rapidly exhaustive of nervous power than any intellectual efforts that are free from such emotional complications. Headaches occur more frequently in persons of adult life than in youth or advanced old age, and a predisposition to them is undoubtedly in many cases hereditary.

Habitual dwellers in town suffer more than residents in the country: women more than men; the nervous and delicate more than the robust, and the middle and upper classes of society more than the lower. All pains in the head especially affect those who neglect the many little attentions and cares that our civilised, and therefore in some measure artificial, mode of life requires. Among these may be instanced regularity in diet, carefulness in adapting the clothing to the requirements of our variable climate, attention to the action of the bowels, and sufficient exercise in the open air.

We must now speak of the treatment of headache, beginning with that form which is dependent on organic disease of the brain. It might

be thought that in these cases we should be powerless to give relief, but such is not always the case, and we can often do a great deal of good.

A permanent pain confined to one spot, and believed to be due to serious brain disease is often best met by the application of a blister over the part.

Large doses of iodide of potassium taken frequently—say three or four table-spoonfuls of the mixture (Pr. 32) three or four times a day—often succeed admirably. This drug is especially indicated when there is any suspicion of a syphilitic taint, or when the pain is worse at night. It is not uncommon to meet with patients, generally men, who complain of pain in the head, usually throbbing in character, sometimes accompanied by intolerance of light. This pain is worse or perhaps felt only at night, and is so severe that it seems as if it would drive the sufferer mad. It may be felt over the whole head, or may begin at the back of the neck, and pass over the vertex of the brow. The pain is very apt to be increased by alcohol. Iodide of potassium (T. 47) will nearly always effect a cure in a week or two.

Should the patient in any case be restless at night it may be necessary to give thirty grains of bromide of sodium (T. 19) at bedtime, to produce sleep. Should other measures fail, a hypodermic injection of morphine may have to be given by the doctor for the relief of pain. Many of the remedies used for other kinds of headache are applicable to the form due to organic disease.

In congestive headache, rest is almost essential to successful treatment. An easy thing, it may be said, to recommend, but how difficult to obtain. Even when complete rest is out of the question, partial rest and additional relaxation may be attended with marked benefit. Often enough attention to little matters of detail as regards the habits of the sufferer may give marked relief. In the busy part of the day the thinker or writer may find advantage in standing at a desk instead of sitting down and leaning over a table. The diet should be spare, and beer and spirits should be avoided. Active exercise in the fresh air and habits of early rising should be enforced: and these measures when rigorously carried out afford the best promise of relief. It is important to get the bowels to act well, and for this purpose two-thirds of a tumblerful of Franz Josef water in a little warm water may be taken once or twice a week, the first thing in the morning. A few doses of Hashra tea will often be found of service in these cases. In nervous and irritable subjects, who are upset by worry and over-work, bromide of potassium (T. 18) is a good remedy.

In many cases of congestive headache nothing succeeds better than aconite. It is indicated when there is a violent compressive pain above the root of the nose, with heaviness and fulness in the forehead as if it would split; when there is a flushed face on lying down, but pale on sitting up; when there is great restlessness; when the tongue is furred, and the whites of the eyes are yellow; when the urine is hot and scanty and high-coloured; when the pulse is full and bounding, and the skin harsh and dry; when there is giddiness on rising, with nausea and noises in the ears; when there is a general soreness or bruised feeling about the whole body; when there is dislike to food, light, and sound, then aconite may be given with advantage. A drop of the tincture (T. 1) may be taken in a little water every quarter of an hour for the first hour, and then hourly.

When the face is flushed and the arteries of the head throb, when there is a sense of fulness and compression about the forehead as if the skull would burst, and when the pupils are dilated and the eyes bright and glassy, belladonna is indicated. This form of headache is increased by lying down and is relieved by assuming the upright position, by leaning the head backwards, and by strong pressure of the head with the hands. There is also giddiness and occasionally dulness of sight. The face is usually puffed and red in the puffiness, and the water is scanty and high-coloured. Often enough there is sleeplessness alternating with unpleasant dreams. The tincture of belladonna (T. 9) may be given in the same way as the tincture of aconite.

Exalgin often proves wonderfully efficacious in the treatment of headache. It is especially indicated when the pain is not confined to any particular part, but is diffused generally all over the head. It is prescribed in the form of tabloids, each containing two grains. Two tabloids should be given at a dose and may be repeated every six hours. Antipyrine and antifebrin are popular remedies, but they should be employed with caution.

Nitro-glycerine, or trinitrine, is suitable for the form of headache which in women often follows the sudden cessation of the periods. The symptoms complained of are usually flushing of the face, throbbing of the vessels of the head and neck, quickened pulse, giddiness, a sense of fulness and oppression at the forehead and back of the head, occasional neuralgic twinges about the side of the head and in the face, and stiffness of the neck. Often enough the face and forehead perspire freely, and there may be singing in the ears, and sparks before the eyes. The medicine acts very rapidly, and in suitable cases a cure is

effected in from five to twenty minutes. The dose is from half a drop to a drop of a 1 per cent. solution in spirit, taken in a little water, or the tabloids (T. 55) may be used.

Nervous headache is by no means an easy complaint to treat. When an attack is threatening, it is a good plan to lie down and observe the strictest seclusion and rest, and when this is done at an early stage it may possibly avert it. Very often, in addition to maintaining the recumbent posture, a glass of good wine or some other form of stimulant may be given with advantage. During the acute stage of a severe nervous headache there is little to be done, and the best thing is to leave the patient alone and quiet in a darkened room. Sometimes ice to the temples does good, but often enough warmth succeeds better. In some cases relief may be obtained by taking a warm bath, and then putting hot water bottles to the feet. If the pulse is good and the face flushed, an emetic of mustard and water or of sulphate of zinc (T. 73) will rid the stomach of offensive matters, and may give relief. When sickness is an accompaniment of this headache, we may try and relieve it by a bismuth draught (Pr. 18), or by taking three or four of the bismuth tabloids (T. 13). Another good plan is to apply a mustard poultice to the pit of the stomach. Sucking small pieces of ice in some cases gives relief. Soda water and a little brandy or dry champagne sometimes answers well, but often aggravates the symptoms, and does more harm than good.

Valerianate of zinc in five- or six-grain doses every two or three hours is highly recommended in nervous headache. In the Gulstonian lectures, delivered before the Royal College of Physicians some twenty years ago, the following opinion was expressed on the subject of the dose:—"If I may venture on such a remark, I should say that, judging from the prescriptions I have met with, this medicine is usually given in doses far too small. My own knowledge of the larger doses was in the first instance accidental. For a lady suffering from spasm of the larynx, I had prescribed a grain of valerianate of zinc in a powder (she was unable to swallow a pill), to be taken every three hours. Six grains had been directed to be distributed into six powders, but the dispenser had sent six powders, each containing six grains. In the morning I found that the powders had been taken with marvellous benefit, and no distress to the stomach." The valerianate proves most serviceable when there is no sickness, and the pain is confined chiefly to the side of the head.

Oxide of zinc is another remedy that often does good. Two of the

pills (Pr. 66) may be taken every two or three hours, or an equivalent dose—five grains—may be taken in powder suspended in a little water or milk.

When the headache is coming on, and the patient is irritable and can get no sleep, four tabloids of bromide of sodium (T. 19) may be given with advantage. It produces refreshing sleep, soothes the nervous system, dispels the other symptoms, and at the same time lessens the frequency and severity of the headaches.

Antipyrine is now a well established remedy for headache, but it must be used with caution as some people are peculiarly susceptible to its influence and suffer from restlessness and irritation of the skin after taking even the smallest quantity. This hypersensitiveness is fortunately not very common, and most patients take one of the tabloids (T. 5) three times a day without the slightest difficulty. A safer and we believe a better remedy is exalgin, which even in the most persistent forms often affords speedy relief. It may be obtained in the form of tabloids each containing two grains, and one of these should be taken with a little water either three or four times a day.

Large doses of chloride of ammonium—say thirty grains every four hours—sometimes give relief. It is soluble in water, but is very nasty, and should any difficulty be experienced in taking it, the solution may be poured into a cupful of milk, and then tossed off. Black currant lozenges, each containing five grains of chloride of ammonium, are now kept by most chemists and afford an agreeable mode of administering the drug. The only objection is that six would have to be taken at a dose. Fortunately chloride of ammonium when it succeeds acts quickly. Should relief not be obtained in six or eight hours it would be useless to take more. Sometimes a dose of quinine (T. 64) does good, and sometimes benefit is derived from taking together a dose of quinine (T. 64) and one of bromide of sodium (T. 19). Salicin (T. 68) may often be taken with advantage, or salol (T. 70) may be given.

When there is great weakness; when the pain is so great as to be aptly described by the term anguish; when there is tenderness of the scalp; when the face is pale, and when there is also chilliness and coldness of the whole body, indicating marked depression, arsenic should be administered. Two drops of the liquor arsenicalis may be given hourly to the extent of four doses, or the tabloids (T. 7) may be employed.

In some cases gelsemium succeeds admirably. The great thing

is to give enough and to give it frequently. The dose of the tincture is for an adult from five to ten drops in a little water every three hours. (Pr. 41.)

The cautious inhalation of a little chloroform (Vaporole 5) in acute nervous headache may control the severity of the paroxysm, and induce sleep; but when there is nausea it is rarely of service, and often provokes vomiting, distressing the patient and increasing the suffering.

In many cases nothing does so much good as a hypodermic injection of morphine. It is especially indicated when the face is pallid and the pulse slow and weak, and the patient is beginning to feel the want of sleep. Even should it not completely relieve the pain, it gives that amount of repose which renders the patient indifferent to all that goes on around him, and in this way the brain gets rest from those harassing thoughts and miserable speculations which continue to haunt him, and from which there is no other mode of escape. When no doctor is at hand to give the injection, benefit may often be derived from giving a good dose of opium by the stomach. A five-grain compound soap pill, containing two grains of opium, may be given to an adult with safety. It is necessary that the patient should lie down and remain perfectly quiet, and an effort should be made to get to sleep. Opium will often afford relief when applied externally. A mixture should be made of warm water and laudanum, and then a piece of lint should be soaked in this and folded into a pad, which should be applied to the temples and forehead.

Many people find that nothing so quickly relieves a nervous headache as a cup of strong tea or coffee. When coffee cannot be obtained the citrate of caffeine tabloids (T. 33) may be used.

The treatment of sympathetic headache depends chiefly on the detection and removal of the cause. In many cases of headache resulting from stomach derangement, *nux vomica* (T. 57) is invaluable. When the patient complains of giddiness on first rising from bed; of nausea early in the morning, brought on especially by the sight or smell of food: of a feeling of weight in the headache made worse by stooping or moving, and of pains in the temples or forehead, this drug is indicated. If, in addition, the tongue is furred, and there is a bitter taste in the mouth; if the complexion looks muddy, and the whites of the eyes are yellow; if the bowels are confined, and the water is high-coloured and scanty, *nux vomica* will succeed almost to a certainty. This form of headache is worse in the morning on waking; it is

increased by mental work, by being in the open air, or in the sunshine, and by the use of tobacco or alcohol in any form.

A good deal of care and tact will be required for the treatment of headache arising from menstrual disturbance. In delicate young women whose periods are deficient in quantity, *actæa racemosa* often does good, whilst in the case of a robust girl suffering from the effects of cold, damp, or change of climate, *aconite* (T. 1), *belladonna* (T. 9), or *nitroglycerine* (T. 55), will prove more useful. *Pulsatilla* (Pr. 43) often succeeds in restoring the flow and removing the headache.

The headache of gout must be treated according to the prominent symptoms, but in many cases the administration of *colchicum* does good. *Quinine* (T. 63) sometimes succeeds admirably in such cases as these.

For headache resulting from rheumatism, attention to diet is of primary importance. Milk and vegetables will often agree better than animal food, and a little dry wine should be taken instead of beer or spirits. *Iodide of potassium* (P. 32) often proves of service. *Bryony* (Pr. 49) is also of great service in rheumatic headache, especially when the pains are relieved by warmth; if rheumatism has attacked other parts of the body, and indigestion is an old-standing trouble, it is very likely to succeed. *Actæa racemosa* often does good in those forms of headache which would appear to be a connecting link between rheumatism and neuralgia. *Actæa* is best given in the form of the tincture of *actæa racemosa*, the dose of which is from fifteen to thirty drops in water three times a day. *Actæa* as a rule succeeds better with women than with men. It is serviceable in that common and distressing headache which affects nervous, hysterical women at the menstrual period, or when the flow is too frequent and too profuse, or at the change of life.

In all forms of headache the local application of menthol is useful. It should be rubbed into the roots of the hair and behind the ears. The inhalation of menthol by the Menthol Pocket Inhaler may be tried with advantage.

There are other remedies for headache which occasionally prove useful, and deserve a word of passing notice. For instance, holding the arms above the head will often relieve the severity of that peculiar morning headache with which some persons constantly awake. Again, compression of the temples with a couple of pads and a bandage sometimes affords marked relief. The effect of pressure did not escape the observation of Shakespeare. When Othello, after listening to the

insinuations of Iago, tried to conceal his feelings from Desdemona by the plea of headache, she replies:—

“Faith, that’s with watching; ’twill away again:
Let me but bind it hard, within this hour
It will be well.” (Act iii., Scene 3.)

And again in *King John*, in the scene between Hubert de Burgh and Arthur, the latter, when petitioning for the preservation of his sight, says:—

“When your head did but ache
I knit my handkerchief about your brows
(The best I had, a princess wrought it me),
And I did never ask it you again;
And with my hand at midnight held your head.”
(Act iv., Scene 1.)

Sometimes the application of ice to the head, cold lotions, or eau-de-Cologne will do good. A recent writer recommends brushing the hair and “shampooing.” He says:—“Amongst other accessories for the relief of headache, I would mention the value of having the hair sharply and vigorously brushed by a hair-dresser during the coming on of a headache; and the circular brush that is prompted to action by machinery is more soothing in its influence than the ordinary brush when controlled solely by the hand of man. For a neuralgic headache and for rheumatism of the scalp, the circular brushing by machinery is only equalled by the comfort of sponging the head with hot water; and it outvies the sponge inasmuch as the patient has nothing to fear from catching cold after the operation. The so-called “shampooing,” will afford relief in some cases; but then it requires a very nice and delicate adjustment of hot and cold douches: for though the warm douche will soothe the poor, irritated nerves, yet, if the officiating priest of the bath is too sudden and too violent in his outpouring of cold water, he will nullify the good effects of his warm waterfall by giving the nerves a shock for which their strength is barely equal. These details may appear trivial to some readers, but I appeal to a headaching audience, and they will, I know, bear me out in my assertion, that it is one thing to be coaxed and soothed by circular brushes and intelligent splashings of warm and cold water, and it is quite another to have a short-bristled brush rattled over your aching head with a charming disregard to the sensitiveness of the nerves of the scalp, and to the comparative value of bristles or box-wood in soothing people’s hair and temper. I have sometimes

shuddered for my turn to come in a hairdresser's room, when I have seen the brush handled by a clumsy apprentice, and heard it tap and rattle against the scalp of some confiding customer." Galvanism occasionally proves useful in headache, and sometimes benefit is derived from freezing the skin of the forehead by means of the ether spray, although the latter mode of treatment, we are inclined to think, is more applicable to true neuralgia.

The preventive treatment of headache consists chiefly in avoiding those conditions which are known to predispose to or excite a paroxysm. Many people who suffer from headache, tremors, and restless nights, derive benefit from giving up tea. Coffee is not equally injurious, and in some forms of headache it undoubtedly often does good. Tobacco, too, is as a rule, not beneficial when there is a tendency to headache, but in some instances a mild cigar appears to ease or even dispel the pain. When a sufferer from nervous headache awakes in the morning with those unmistakable symptoms that usher in a day of pain, he would do well to forego his accustomed cold bath, for his standard of health is obviously low, and no reaction will follow the application of cold.

HEART—DISEASES OF THE HEART.—There are three great causes of heart disease. Either it is congenital, or it is the result of rheumatic fever, or it is due to degeneration. We remember a great medical teacher used to say—"If you have not heart disease now, and don't get rheumatic fever, you are safe till you are over fifty." Children are sometimes born with malformation of the heart, but their lives are short, and those cases need hardly enter into our consideration. In this country rheumatic fever is the most common cause of heart disease. Thanks to our changeable climate rheumatic fever is a very prevalent complaint, and its great danger is that it may affect the heart. Many a man has suffered from years of misery as the result of an apparently slight attack of rheumatism of which at the time he probably thought little. In children, rheumatic fever is very apt to be overlooked, especially when the joints are but slightly affected, and the whole brunt of the attack falls upon the heart. Sometimes heart disease comes on after scarlet fever, but these cases are exceptional. In athletes, gymnasts, labourers, and those who have heavy weights to lift, heart disease is not uncommonly the result of a severe strain. In these cases the onset is often very sudden, the patient perhaps at the

moment suffering from severe pain and shortness of breath, and he may even experience a sensation of something having given way in his chest.

We have, so far, spoken of heart disease as a whole, but it must be remembered that there are many different kinds of heart disease. These varieties are perfectly distinct, but they can be distinguished only by a skilled examination of the chest by a medical man, and it is impossible for us to lay down any rules for their recognition.

Among the general symptoms of heart disease may be enumerated pain in the chest, palpitation, blueness of the face and lips, difficulty in breathing, cough, dropsy, and an irregular pulse. It must be distinctly understood that it is the combination of these symptoms that would lead us to suspect heart disease; and that the presence of only one or two would mean nothing. Pain in the left side is a symptom from which most of us suffer at some time or other, but it alone is not to be regarded as indicating the existence of heart affection. In the majority of cases it is purely muscular in origin, resulting from general debility and over-exertion. Weak, ill-fed, badly-nourished, sickly women, exhausted by frequent pregnancies and long-continued suckling, often suffer from it terribly, and their general debility often gives rise to palpitation of the heart, but there is no actual disease, and the proof of this is that it is readily cured by good feeding, freedom from worry and anxiety, out-door exercise, and a moderate allowance of stimulant. In nine cases out of ten, pain in the side means general debility, and not disease of the heart. This is a point of some importance, for it is one on which a great deal of misapprehension exists. Then palpitation alone is never to be regarded as evidence of heart disease, although many people get very much alarmed about it. It usually arises from the stomach and not from the heart. A common cause of palpitation in young men is excessive smoking, and if they will only consent to give up their pipes for a few weeks it gradually disappears, to return perhaps on resuming the tobacco. We know of an instance where a gentleman suffers from severe palpitation for days after indulging in even a single cigar or pipe, and yet he is perfectly free from any heart affection. In women tea often acts in the same way. We quote the following case as an example of the mode in which palpitation often arises. "A friend of mine, a barrister, used to be very anxious about himself, because a fluttering sensation frequently occurred at his heart; an intermission of one or two beats, and then a violent throb when the organ again resumed its play. This is a sensation very familiar to my own

consciousness, and probably most persons have occasionally experienced it. However, it happened so often to the gentleman I speak of that it made him very unhappy. He persuaded himself that he had disease of the heart, and that he should some day suddenly drop down dead. But there was no other symptom of cardiac disease, direct or indirect, general or physical. He was accordingly told that the intermission depended upon some fault in his digestive organs; and he was advised to leave off different articles of food and drink in succession, in order to discover whether any one particular thing offended the stomach and gave rise to the symptom. He began by abstaining from tea, of which he had been in the habit of drinking a large quantity; and thereupon the fluttering of the heart ceased. After a while he took to tea again, and then the fluttering returned. He repeated the experiment many times, and always with the same result, till at length his mind was satisfied; and by renouncing tea altogether he got rid of his palpitation and of his apprehensions." This is an instructive case, well worth the attentive study of those who suffer from palpitation, and think they have heart disease. We shall have more to say on this subject presently (*vide* PALPITATION).

Shortness of breath and cough may arise from many diseases other than those of the heart, as, for example, winter cough and asthma. It is only in combination with other symptoms that they are of any value in indicating disease of the heart. Dropsy, as we have seen, is a frequent concomitant of heart disease, but it is also a symptom of Bright's disease and many other affections, and may even arise from pronounced anæmia, or poorness of the blood. It is often said that inability to lie on the left side, combined with palpitation of the heart, is to be regarded as an indication of serious mischief, but this is not strictly true, for patients with neuralgia of that side can rarely endure the posture in question, and there are many other exceptions to this rule.

It might be supposed that the amount of pain and distress experienced in the chest would form some guide to the condition of the heart, but such is not the case, for, singularly enough, the amount of suffering entailed by mere functional disturbance is, in the majority of cases, infinitely greater than that produced by actual disease. A patient with a serious heart affection that may kill him at any moment often experiences so little trouble from it as to express petulant annoyance at having his chest examined, whilst another individual suffering from nothing but indigestion and flatulence refuses to be persuaded of his freedom from some mortal malady. If you think you

have heart disease, it is ten chances to one that you have not. The majority of people who really have some heart affection know nothing about it till they are told by the doctor.

Many persons suffer from habitual feebleness of the heart's action. This condition may occur in conjunction with disease, but usually it is a mere functional disorder of but little significance. The symptoms to which it may give rise are coldness and clamminess of the hands and feet, a little swelling about the ankles and insteps, shortness of breath, frequent inclination to faintness, sensations of languor and *ennui*, low spirits, loss of appetite, disagreeable breath, and confined bowels. This state of affairs often occurs in young women, frequently in association with some disorder of the menstrual function. As regards treatment, such medicines as iron (Prs. 1, 2, 3, 4, 6, and 7, or T. 15 and 65), quinine (Prs. 9 and 11, or T. 63), and cod-liver oil should be given. The patient should be made to take a fair amount of exercise in the open air.

Many people suffer from pain in the left side, the chief seat of which appears to correspond to a limited spot a little above and to the left of the nipple. It is apparently situated at some little distance below the surface. Remaining limited to this spot for a variable time, it may eventually extend downwards to the elbows, or even to the tips of the fingers. The pain may be in character shooting or grinding, and the sensation may be merely one of uneasiness, or it may give rise to the greatest anguish. These symptoms are not to be regarded as affording indications of heart disease, although it is to be feared that the more severe forms are allied to that disorder which we have described as angina pectoris (*vide* ANGINA PECTORIS). In slight cases relief may be obtained by a course of tonics (T. 79), by attention to the general health, and by wearing a belladonna plaster over the region of the heart. In more severe cases in addition to the general treatment, nitro-glycerine (trinitrine) in the form of tabloids (T. 55) will prove beneficial.

The act of bending forwards, especially in the sitting posture, and if accompanied by some effort, as in drawing on a boot, is often followed by a peculiar pain, usually referred to the heart. It is relieved more or less quickly by stretching out the chest wall and pressing on the surface. Once produced it is often readily re-excited, and many people are obliged to exercise the greatest caution, in order to prevent its recurrence. The pain is muscular (*vide* MYALGIA), and is not an indication of heart disease. Wearing a bandage round the chest, or the

application of a belladonna plaster over the affected region might prove useful.

Many people worry themselves very unnecessarily on the subject of a fatty heart, for it is a complaint that is rarely detected. Although occasionally met with in young people, the disease is essentially an appanage of middle and advanced life. Women suffer from it much more rarely than men. It occurs in all ranks of society, though, to a certain but undetermined extent, more in the upper and middle classes than among those who earn their daily bread by manual toil. It does not appear that indulgence in the good things of this life especially favour its production. One sees it in men whose rule for years has been to consume at least their daily bottle of wine, in gross beer-drinkers, and in spirit-drinkers; but it is almost as frequently met with in persons who have led a life not only of soberness, but almost of abstinence. The symptoms to which fatty heart gives rise are by no means characteristic. We would say that the fact of your thinking that you are suffering from this complaint is to be regarded as presumptive evidence that you are not.

HICCUP, OR HICCOUGH.—Hiccup is a complaint—if it may be dignified by the name of complaint—which seldom gives rise to any anxiety, or calls for active treatment. It usually passes off in a few minutes, or in the course of half an hour, even if nothing be done for it. One of the commonest and most convenient modes of arresting it is to close the mouth and hold the nose as long as possible. Some people prefer tossing off a tumbler of water, whilst others run upstairs as fast as they can. A sudden shock will often stop it more effectually than anything; a friend comes up and gives you an unexpected dig in the ribs or slaps you on the back, and your hiccup is gone. Sometimes in hysterical young women it persists for days, to the great annoyance of everybody. The treatment in such cases should be directed to the hysteria rather than to the hiccup. Occasionally it occurs in the course of acute illnesses such as fevers, and is not to be regarded as a good sign, although, of course, too much importance must not be attached to it. In the case of a corpulent man suffering from typhus fever it continued for eighteen hours out of the twenty-four on several consecutive days.

We may mention a few remedies that might be resorted to in case of need. Obstinate and even dangerous cases of hiccup are reported

to have been cured by drinking an infusion of mustard made with a tea-spoonful of mustard steeped in four ounces of boiling water for an hour, and then strained. Camphor has been recommended, and so has a mixture of chloroform and laudanum, but we are unable to say in what doses they are most likely to do good. A hypodermic injection of morphia sometimes succeeds when other measures have failed. Chloral often effects a cure when given in ten-grain doses (Pr. 37), and a few drops of sweet spirits of nitre on sugar have been known to arrest the spasm. Three or four drops of dilute sulphuric acid in water every ten minutes or a quarter of an hour might be tried. Pure terebene, pinol and eucalyptia are good remedies. Gelsemium (Pr. 41) may sometimes be given with advantage. Musk is a remedy which proves of value, especially in hysterical young women. A useful draught may be made by mixing together a tea-spoonful of fetid spirit of ammonia, a table-spoonful of lime-water, and a table-spoonful of peppermint-water.

For the hiccup of drunkards, reliance may be placed on tincture of *nux vomica* (T. 57), given in five-drop doses every hour for three or four hours, or even longer. Ten-minim doses of tincture of capsicum often succeeds admirably in these cases. This treatment not only cures the hiccup, but obviates the morning vomiting, and removes the sinking at the pit of the stomach and the intense craving for stimulants, from which these people so often suffer. The medicine may often be continued with advantage to the general health after the hiccup has been relieved.

HYDROPHOBIA—RABIES.—Few complaints have attracted greater attention or have been more carefully studied than hydrophobia. It is a disease of considerable antiquity, an unmistakable account of its phenomena being found in the works of Aristotle. It is also mentioned by many other ancient authors, poets, and historians, among them by Homer, Xenophon, Horace, Ovid, Plutarch, and Pliny.

It is a disease due to the introduction into the system of a special poison existing in the saliva of the affected animals. It occurs most commonly in dogs, but cats, horses, pigs, goats, sheep, wolves, foxes, hyenas, jackals, and horned cattle occasionally suffer from it. Its production in man is nearly always caused by the bite of a mad dog.

It was at one time supposed that the disease originated spontaneously in dogs and other flesh-eating animals, but there are reasons for believing that this view is erroneous. It is often said that in dogs

it is produced by certain accidental circumstances—such, for instance, as the intense heat of the “dog days,” severe cold, and want of drinking water; also by such causes as domestication, training, and the physical deterioration induced by their artificially-acquired modes of life. In reality, however, there is not the slightest evidence in favour of the correctness of this view. It must be admitted that these abnormal conditions of life may predispose dogs to mental and nervous disturbances, and may even favour the production of madness, but they in themselves never suffice to originate the disease. We may feel assured when a dog becomes rabid that it has either been bitten by another mad dog, or has contracted the disease from some wild animal of a kindred species. It is said that in the mountains of Switzerland the dogs are frequently infected by the bite of rabid foxes.

It is a curious circumstance that some dogs appear to have the power of resisting the action of the poison which produces hydrophobia. In the veterinary school at Lyons, a pointer, which had been bitten experimentally no less than seventeen times by dogs suffering from rabies, remained unaffected. Other dogs resist two, three, or even four attempts at inoculation, and are finally infected at a subsequent trial. Whether the bite of a mad dog is followed by infection or not depends, apart from the individual predisposition, upon accidental conditions, especially upon whether the bitten part is protected by hair or other covering, which would wipe off the saliva before the teeth came in contact with the skin.

It is usually supposed that madness in dogs is more common during “dog days” than at any other time of the year. In reality rabies occurs nearly as often in the spring, in the autumn, and even in the winter, as it does in summer. Statistics show that January, which is the coldest, and August, which is the hottest month in the year, are the very months which furnish the fewest examples of the disease.

The symptoms of hydrophobia in dogs are well worthy of consideration, as by the early detection of the disease prompt measures can be taken for the isolation or destruction of the animal, and a great danger may be averted. Persons are liable to be bitten by mad dogs under two sets of circumstances: firstly, when a rabid animal escapes from home, and is at large; and secondly, when a dog, not known to be affected, is caressed by his master or some of the family. It is, consequently, quite as important to be aware of those slight indications which should afford ground for suspicion that the disease is impending as to know the characteristic signs by which it may be recognised when it has fully

declared itself. The premonitory symptoms of rabies in a dog consist almost entirely of changes in its demeanour, and although they may be too trifling to be noticed by a casual observer, they are fortunately sufficiently striking to arrest the attention of anyone who is familiar with the animal's habits and individual peculiarities.

A dog about to become rabid loses its natural liveliness, and mopes about as if preoccupied or apprehensive, and frequently seeks to withdraw into dark corners.

A change is noticed in his temper, and he becomes either unusually confiding and friendly, or, on the contrary, extremely irritable, morose, and easily enraged.

From the first there is a foreshadowing of that most constant symptom of the disease—depraved appetite. Mad dogs not only devour filth and rubbish of every kind with avidity, but will even eat their own excrement, and that immediately after it has been passed. This tendency usually appears early, and when a dog refuses his accustomed food and swallows ravenously such substances as hair, straw, dung, rags, earth, bits of leather, and the like, his conduct, to say the least of it, is very suspicious.

Along with this peculiarity in behaviour it is of equal importance to notice that an affected dog from the first snaps at other dogs without provocation. This snappishness in most dogs is very striking. If a dog previously known to have no such habit snaps indiscriminately at the first dog it meets, it is in all probability not safe.

A dog which is at large may also be recognised as being in a dangerous state by its general demeanour. A healthy dog in its progress along a street or elsewhere shows at every step that its attention is awake to the sights and sounds by which it is surrounded. The rabid dog, on the contrary, goes sullenly and unobservantly forwards, and is not diverted by objects obviously likely to attract its attention. This statement, however, is subject to the important exception already referred to, that it is excited both by the sight and sound of an animal of its own species.

These premonitory symptoms may last one or two days or only a few hours. Gradually the animal displays increased restlessness and uneasiness, and if chained up he usually endeavours to break away or to tear his kennel to pieces. If he succeeds in getting loose, he will either wander about in an objectless kind of way, or he will start off running as fast as his legs will carry him, sometimes performing considerable distances in an almost incredibly short space of time.

The desertion of his home by a previously faithful dog is a circumstance which should always excite suspicion.

The animal frequently returns after a short absence, and then almost invariably exhibits a decided propensity to bite, a propensity manifested to a less degree in good-natured dogs than in those naturally ferocious. It is a well-known fact that rabid animals retain a certain affection for people they know, and with whom they are brought in frequent contact. A dog will at first not bite his master, but rather seeks to avoid his presence. It has been frequently noticed in fox-kennels that a mad dog will attack only the males of his own species and spare the females.

Sometimes the animal manifests a decided insensibility to pain, remaining quiet under blows and treatment which would call forth a vigorous protest from a healthy dog. It is said that a mad dog will seize a red-hot poker, and in some instances they have been known to bite off the end of their own tail.

A decided alteration in the sound of the voice is usually detected. The bark entirely loses its ring and acquires a peculiar hoarseness which is readily recognised by the most unobservant.

Attention is sometimes drawn to the condition of an animal supposed to be healthy by observing that it tries to scratch the corners of its mouth as if attempting to get rid of the ropy mucus which is freely discharged from it.

As the disease progresses the discharge increases, the lower jaw hangs as if paralysed, and the animal has evidently a difficulty in swallowing.

With the extremely small quantity of nourishment taken, the animal rapidly emaciates, and in a few days from the onset of the illness a very striking alteration is noticed in his general appearance. The flanks fall in, the eyes become dim and sunken, and the general weakness is so great that the animal can scarcely stand.

His powers of biting are now very feeble, and he curls himself up as if trying to sleep, and in this manner gradually and tranquilly dies. Death usually ensues on the fifth or six day, rarely later, and life is never prolonged beyond the tenth day.

We must especially call attention to the fact that in dogs suffering from hydrophobia no special dread of water is manifested. In exceptional and extremely rare instances only do the animals suffer from spasm of the throat in their attempts to drink. They tolerate the sight of water without any sign of excitement, and will splash about in it

and drink freely. There is a case on record of a man who died from hydrophobia arising from a bite on the hand, received whilst endeavouring to rescue a dog from drowning.

Rabid dogs seldom display any special aversion to light, air, or the glare of the sun.

In many cases, from the first to the last that wild fury which is commonly supposed to belong to the disease is conspicuously absent. In one particular form of canine hydrophobia, known as dumb rabies, the lower jaw is early paralysed, and the peculiar howl is then lost.

The symptoms occurring in other animals suffering from hydrophobia are similar to those described in the case of dogs.

When foxes are under the influence of the disease they lose their natural shyness, and follow men and animals, biting them if they get an opportunity.

Wolves are more to be feared than foxes, from their greater strength and ferocity. They attack human beings without the slightest hesitation, and generally succeed in inflicting severe wounds about the face, neck, and hands.

Cows, horses, sheep, and deer, from their limited powers of biting, seldom succeed in communicating the disease to man.

Rabies never arises spontaneously. As the actual inoculation of the system with the saliva of the rabid animal is necessary for the production of the disease, it may readily be imagined that it is not everybody who is attacked by a mad dog that contracts hydrophobia. It is possible that some people are more susceptible to the disease than others, but the situation and character of the wound in all probability exert a great influence on the result. It is obvious that when the injuries are situated on the hands and face, the danger of the super-vention of hydrophobia is much greater than when they have been inflicted on the covered portion of the body or limbs, for in the latter case the clothing protects the wound from the action of the saliva.

The symptoms produced by hydrophobia in man are somewhat different from those we have described as occurring in animals. Let us suppose that a man is bitten on the hand by a mad dog, what happens? At first nothing; the wound behaves, to all appearance, just as it would have behaved if the dog which produced it had not been rabid—that is, it gradually heals up. After an uncertain period, which may vary from three or four weeks to as many months, or even longer, the patient experiences an uneasy sensation in the situation of the bite. The scar tingles, or aches, or feels numb, or it may even become

inflamed, and the wound break out afresh. In a few hours or days, during which the patient feels uncomfortable, and "ill all over," the constitutional symptoms make their appearance. Pain and stiffness are experienced about the head and neck, and then the most characteristic symptom of the disease, inability to swallow fluids, sets in. The patient is thirsty, but is unable to swallow, every attempt bringing on a fit of choking and sobbing of a most distressing character. This continues for a few days, and then the patient gradually dies of exhaustion.

Sir Thomas Watson has given a graphic account of a case of hydrophobia which came under his observation. It is too long to transcribe in full, and we must consequently content ourselves with giving an abstract of the chief features, believing that such a course will be more conducive to a correct appreciation of the nature of the disease than a mere enumeration of the symptoms. The patient was a coachman, whose right hand had been struck ten weeks previously by the teeth of a terrier dog. He was brought to the hospital on a Tuesday. On the preceding Thursday his hand became painful and swollen. On Friday the pain extended into the arm, and became more severe. On the morning of this day he had refrained from taking his usual cold bath on account of some feeling of spasm about his throat. His own remark about this was that "he could not think how he could be so silly." On Saturday the extent and severity of the pain had still farther increased, and on this and the preceding night he got no sleep. He felt ill and drowsy on the Sunday, and the pain extended to the shoulder. The next day he complained of feeling "ill all over," and told his medical attendant that he could not take his draughts, because of the spasm in his throat. That gentleman, concealing his own suspicions as to the true nature of the disease, said, "Oh, you don't like the taste of your physic! Drink some water." But he declared that he had the same difficulty with the water. The next day he came to the hospital, when there was water brought and placed before him in a basin, for the alleged purpose of allowing him to wash his hands. It did not seem to disturb him, nor to excite any particular attention. Water was then offered him to drink, which he took and carried to his mouth, but drew his head from it with a convulsive shudder. Subsequently water was again brought him, which agitated him, and he became exceedingly distressed and unquiet, complaining of the air which blew upon him. In the evening he made an attempt to take some gruel. He sat up, and after a moment's look of serious terror took half a spoonful of the gruel in a hurried gasping manner, and then said he would not take

more at a time lest *the sensation* should come on. He was desired to drink the last portion of the gruel from the basin. He accordingly seized it with hurry, carried it to his mouth with an air of determination, and then a violent choking spasm of the muscles about the throat ensued, and most of the gruel was spilt over his chin. He observed that he had been in too great a hurry about it, or he should have managed it. On the Wednesday, at noon, he was in nearly the same state, but said he was better. In the course of the night some morsels of ice had been given him. With considerable effort he swallowed two or three of these; the third and fourth caused so much spasm, however, that he was obliged to throw them out of his mouth, but so great was his resolution, that he seized them again, and by a strong exertion succeeded in swallowing them. He complained now that his mouth was and had been clammy; and he champed much, and spat out a good deal of tough mucus. At his own request, and (as he said) that he might injure no one, a straight-waistcoat was brought, which he assisted in putting on. He subsequently made an attempt to take some arrowroot, the effort being preceded by hurried inspirations and sobbings precisely resembling those which occur when one gradually wades into deep water. He swallowed small quantities of arrowroot eight or nine times with hurry and difficulty, and with sighs that succeeded each other rapidly. By the evening of that day the disease had not made much further progress. He again sat up and tried to eat some thinnish gruel. While taking the basin into his hand he drew back his head to a distance from it, apparently involuntarily. He took one half-spoonful with effort and distress, then sighed deeply and rapidly, or rather his breathing consisted of a succession of sighs at short intervals; he gave up the basin and sank back on his pillow, still sighing. The next day he was still composed, though more easily irritated, his pulse was 140, and much weaker than before, and his mental powers were failing. He gradually sank, and died in the evening, having repeated the Lord's Prayer an hour previously. During the last hours of his life he had been moaning and tossing from side to side; his bowels were purged; fluid stools ran from him, and distressed him greatly. His feet and legs first became cold, and the coldness extended by degrees up to his chest. He hawked up in the course of the day a considerable quantity of ropy mucus, and much frothy saliva came from his mouth towards the close. The duration of this case was unusually protracted, and on the whole the symptoms were less violent than usual.

It is almost needless to say that there is not the slightest fear of the disease being communicated by a patient to his attendants. In former times it was universally believed that the unfortunate sufferers had both the power and inclination to impart the disease to others by biting them. Everyone feared to be bitten, and fancied that by merely coming in contact with the body, or treading upon the saliva of a diseased person, the malady might be contracted. The nearest relatives fled from the patients, and abandoned them to their fate, as if they were so many wild beasts. Sometimes, however, with the view of shortening their sufferings, as they said, they put them between two feather beds, and smothered them, or they opened a vein, and let them bleed to death. It is stated, moreover, in a work recently published on the subject, that even in our own day there are districts in Europe (the military frontier of Austria) where the dread of hydrophobia is so great that human beings who are suffering from it, or who are suspected of being so affected, are shot by their neighbours, whilst those who have been bitten by rabid animals not unfrequently commit suicide.

When a person has been bitten by a suspected dog, the animal should on no account be killed, for it may turn out that, after, all it was not really mad.

The beast should be carefully secured so that it can do no further mischief, and then watched. A few days' observation might show that the suspicion as to the nature of the disease was unfounded.

Rabies is invariably fatal in the dog under ten days, so that if the animal survive that time the bitten person may feel assured that he is in not the slightest danger, and has no cause for apprehension.

By taking this simple precaution, not only may the patient's mind be relieved of a most harassing fear, which might otherwise have tormented him for months and years, but the dog will be afforded an opportunity of clearing his character of a most unjust suspicion.

It should always be remembered that the majority of dogs who bite and snap are only vicious and not rabid. When a mad dog bites through the clothes, particularly if they consist in part of woollen material, the poison is very often wiped off from the teeth, and the system is not in reality inoculated. The large majority of those who are bitten by mad dogs escape hydrophobia, in fact, the Registrar-General's reports show that the annual mortality from this disease seldom exceeds twenty-five, and is often as low as eleven.

As the greater number of cases occur between the thirtieth and

fortieth days, when the latter period is safely passed every hope may be entertained that no harm will arise from the accident.

After the expiration of the second month the patient may be considered almost absolutely safe.

It is the opinion of many doctors that a patient may readily succeed in frightening himself to death, and that the terror inspired by the bite of a mad dog may prove fatal.

What should be done when a person is bitten by a mad dog?

In the case of the arm or leg a pocket-handkerchief or piece of rope should be tied tightly round the limb above the bite.

The sufferer should then immediately suck the wound with all his might, or if from its position or his want of presence of mind he is unable to do so, some friend or good-natured bystander should perform that office for him. No danger is incurred in sucking the part, provided there be no wound on the lips or other surface with which the poison comes in contact.

As soon as possible the bitten part should be either cauterised with nitrate of silver or carbolic acid or cut out with a knife.

The late Mr. Youatt, who, in the course of a long experience, had treated a very large number of persons who had been bitten by dogs undoubtedly rabid, placed the greatest reliance on the application of lunar caustic (nitrate of silver), which, so far as he knew, had in every case prevented the development of hydrophobia. He had an undoubted right to speak with authority, for he tells us that he had himself been bitten seven times, and that he had operated with the caustic successfully on more than four hundred persons, all bitten by dogs respecting the nature of whose disease there could be no question. It is absolutely essential that the caustic should be brought in contact with every particle of the exposed surface. When, from the extent or situation of the wound, the nitrate of silver stick cannot be effectually employed, fuming nitric acid may be used. Abercromby was in these cases an enthusiastic advocate for the use of the knife. He advised that a skewer should be cut as nearly as possible into the shape of the dog's tooth, and insert it into the cavity which it had made. He then by a bold sweep cut out the skewer and the whole of the surrounding tissue in which it was contained, taking the greatest care that every portion with which the tooth had come in contact was thoroughly removed. Many people nowadays would entertain a very decided objection to such energetic treatment, even although all pain might be avoided by the performance

of the operation under chloroform. In the absence of a skilled surgeon the application of a red-hot poker or Italian iron is to be preferred. The pain of the application is probably very much less than is usually supposed. Another plan is to cover the part with gunpowder and then explode it.

These preventive measures to be of the slightest avail must be carried out immediately. As a matter of fact, more or less delay from unavoidable causes nearly always does occur, and sometimes no attention is paid to the wound until too late in consequence of the absence of any suspicion attaching to the animal.

These preliminary steps having been taken, what further measures should be adopted by a person who has been bitten by a dog which may be suffering from rabies?

In the present state of our knowledge there is only one possible answer to that question. The patient should at once undergo a course of what is called the Pasteur treatment.

What is the Pasteur treatment? The virus producing rabies contains a living organism or bacterium. Bacteria during their life produce chemical substances which ultimately kill them just as a man produces carbonic acid which would prove fatal if he were confined in it. Pasteur aims at collecting the secreted substance, and by injecting it into the person who has been bitten, preventing the development of the bacteria. So far he has not been able to get this secreted substance pure, but by attenuating the virus he gets rid of most of the bacteria, and obtains the secretion in a highly concentrated state. This is the protective fluid which prevents the development of hydrophobia. It has to be prepared with great care, the virus of the dog being passed through eighty rabbits before it is fit for human use. The injections are varied in dose and intensity at different stages of the course, which usually occupies twenty-one days.

Now as to the results. The mortality amongst untreated patients bitten by dogs believed to be rabid is at least one in seven.

The mortality amongst patients who have undergone the Pasteur treatment is less than one in a hundred.

From January 1st, 1886, to January 1st, 1891, Pasteur treated 9,465 patients, of whom only ninety died.

The deaths without treatment would have been 1,352, showing a saving of 1,262 lives in five years.

Many of the deaths occurred amongst patients who had not been able to avail themselves of treatment until the last moment,

and had travelled very long distances under very disadvantageous circumstances.

The treatment is unattended with pain, and thanks to the elaborate precautions which are taken, no irritation is produced at the point of injection.

If the patient can resort to this treatment at once, and can travel expeditiously and under fairly favourable circumstances, the result is practically a certainty.

In addition to L'Institut Pasteur at Paris similar institutions have been founded in Russia, Italy, Turkey, Brazil, and the United States. The Institut Antirabique of Turin under the care of Dr. Bordoni-Uffreduzzi; that at Tiflis under the direction of Dr. T. Finkelstein; the one at Warsaw controlled by Bujuid, and the Institut Pasteur at Odessa, have done good work. Dr. V. Kraïouchkine, Chef de la Section Antirabique à St. Pétersbourg, has obtained some most brilliant results, so that the patient coming from England has quite a large choice of cities which hold out to him the means of restoration to health.

Should the patient decide not to adopt the requisite measure to ward off the disease after being bitten by a mad dog, he must take his chance of falling a victim to the disease. It is only fair to say that when once the symptoms are developed, inoculation will not save him. There are certain modes of treatment which may be resorted to as a kind of last hope, but the chances of recovery are very small. We believe that practically the only thing to do is to go off at the earliest possible moment after being bitten, and to undergo a course of treatment.

In spite of what we have said we are quite prepared to discuss the mode of treatment to be adopted when the disease has fully declared itself. Most medical writers on this subject are sufficiently explicit, for they affirm their utter unbelief in any method of treatment. "No specific method of treatment has been shown to have the slightest influence in checking or modifying this disease from which, in all probability, no one ever recovered." "There is no well-authenticated case on record in which a hydrophobic person has recovered." "The physician that cures is Death." Such are the opinions of some of our most eminent physicians and writers on medicine.

We believe that sufficient evidence has been adduced in favour of our common box (*Buxus sempervirens*) as a remedy for hydrophobia to justify its employment. It is the active ingredient in many of the secret remedies which have obtained a reputation for the cure of this disease.

The Groombridge receipt, which was for several generations in the possession of a family living in the neighbourhood of Uxbridge, was some years ago purchased at the instigation of a medical man who had had opportunities of witnessing its effects, and had published an account of some cases which had occurred under his observation. It was found to consist of the terminal branches and leaves of box, of fetid hellebore, primrose roots, gascoigne powder (a mixture of crabs' claws, hartshorn shavings, and amber), jalap, and carbonate of iron. The primrose roots were not considered essential, and had been omitted for some years.

The Birling remedy, which in popular estimation has obtained some reputation, is said to consist of box, staggerwort, primrose roots, bears'-foot, powder of white gashen, jalap, and steel.

Many of the older writers on medicine and drugs appear to have been acquainted with the properties of box. Thus old John Parkinson, in his "Theatre of Plantes," published in 1640, says:—

"One medicine that I learned of a friend who had tried it effectual, I will here set down unto you to cure the biting of a mad dogge, is to take the leaves and rootes of boxe, and penny-royall, of each a like quantity, shred them small and put them into hot broth, and let it be so taken three days together, and apply the herbe, etc., to the bitten place with sope and hogges' suet melted together."

In a curious work on the diseases of dogs, published early in the present century by Delabere Blaine, a veterinary surgeon, a very interesting account is given of his discovery of the composition of a remedy for hydrophobia, and of the results obtained by its employment in a large number of cases. It appears that the author had for some years known that there lived near Watford a cottager of the name of Webb, who dispensed what is commonly called a drink, as a preventive of hydrophobia. From the number of testimonials received relative to its efficacy, there were reasons to suppose that it really possessed some preventive properties. In the year 1807, rabies proved very prevalent, and the public curiosity became much excited on the subject. Mr. Blaine had his interest in the question greatly enhanced by "having been bitten by a dog unquestionably rabid." He accordingly went to Watford, and, as he says, prosecuted his inquiries with such success that from one of the two brothers who had dispensed it he gained the original recipe, which he took the precaution of having verified on oath before a magistrate. It was found to consist largely of box. The method of preparation adopted by Mr. Blaine is as follows:—Take

of fresh leaves of the tree box, two ounces; of fresh leaves of rue, two ounces; of sage, half an ounce. Chop these finely, and, after boiling them in a pint of water to half a pint, strain and press out the liquor. Beat them in a mortar, or otherwise bruise them thoroughly, and boil them again in a pint of milk to half a pint, when press out as before. After this mix both liquors, which will then form enough for three doses, one of which is to be taken every morning fasting.

Mr. Blaine, in the course of a long and extensive practice, gave this remedy to nearly three hundred living beings, including men, women, and children, horses, hogs, sheep, and dogs. In almost every case he was enabled to trace the history of the danger to the bite of some rabid animal. Although he was unable to regard box as an absolute specific for hydrophobia, the number of cases in which it failed in his hands was small.

We think that this combination of testimony should induce us to give box a trial in cases of hydrophobia. We might either follow Mr. Blaine's directions as to its mode of administration, or, as we think preferably, omit the rue and sage, and give the box alone. The alkaloid or active principle is known as buxine, and is readily obtainable, but we know of no case in which it has been given in hydrophobia, although it is very probable that benefit might ensue from its administration.

A case of hydrophobia has been published in which recovery was attributed to hypodermic injections of morphia frequently repeated.

The hypodermic injection of curare has been found of some avail, but it is a mode of treatment which should be resorted to only by a medical man. It can be obtained in tabloids.

Of late years the use of the vapour bath has been recommended, not only as a preventive of hydrophobia, but as a means of curing the disease when fully developed. It is not at all improbable that it may be instrumental in eliminating a virus which lurks so long in the system. The bath is recommended to be taken, *à la Russe*, on several successive days, at a temperature of from 57° to 63°. Benefit might possibly be derived from the use of the Turkish bath.

In addition to the specific treatment, we should try to soothe and comfort the unfortunate patient by every means in our power, and should be especially careful to prevent all noises, draughts, and other sources of excitement which are so liable to excite the painful spasm of the throat. It has been suggested, and apparently with good reason, that large fluid injections might with advantage be administered by the

bowel. By checking the agonising thirst, they would in all probability lessen the sufferings of the patient.

Before concluding this article it may be as well to consider what steps can be taken to prevent the propagation of rabies.

Of all the domesticated animals which may become affected the dog unfortunately is most frequently attacked. It is the chief, if not the only, propagator of the scourge in this country, and it is practically certain that if the canine species were completely freed from rabies the disease would absolutely disappear.

Of all known contagious diseases it is the one which can be most easily and quickly extinguished, provided that the proper measures are enforced. It is in the interests not only of mankind, but of all domesticated animals, and especially of dogs themselves, that this terrible and almost uniformly fatal malady should be stamped out.

There is abundance of evidence to show that the disease can be suppressed by the enforcement of proper measures. In Sweden, Norway, Switzerland, Baden, Prussia, Bavaria, and Wurtemberg it is practically a thing of the past. In Australia and New Zealand, where it has never been seen, precautionary measures have served to keep it out.

To stamp out hydrophobia the first step is to prohibit the importation of dogs into the country, or to admit them only from other countries free from rabies, and after a period of quarantine equal at least to the maximum period of latency of the disease.

The next step is to authorise and enforce the destruction of all dogs which are rabid or are suspected of being rabid. This is really a kindness to the animal, for the disease is incurable, and the dog would of necessity die in a few days and after much suffering. Means have recently been devised of killing dogs by a method which is perfectly painless.

Ownerless and wandering dogs should be seized by the police and if not claimed within a few days should be destroyed. A dog without a home and without a master is always a source of danger to the community, and his life is at the best not a happy one.

All dogs during the prevalence of rabies should be made to wear a properly-constructed and well-fitting muzzle. The value of the muzzle in suppressing rabies has been demonstrated over and over again. In Vienna the disease was entirely suppressed for eighteen months, thanks to stringent muzzling, and equally good results have been obtained in many countries. It may be noted that Belgium has tried all the other

recognised measures except muzzling, and yet the malady is as rife and deadly as ever in that country.

Mr. George Fleming, who has done so much for the protection of man from hydrophobia, speaking of the muzzle, says:—"Senseless sentimentality has opposed the use of this article in a most extraordinary manner in this country, and one would be inclined to believe that there are people who care less for human suffering and human life than for a little inconvenience or discomfort to dogs. A well-fitting muzzle should cause very trifling inconvenience and discomfort, while ensuring absolute safety from dog bite."

HYPOCHONDRIASIS.—Hypochondriasis may be said to consist essentially of an exaggerated egotism. Its principal feature is mental depression occurring without adequate cause, and taking the shape of a conviction in the patient's mind that he is the victim of some serious bodily disease. It is a complaint that has been recognised from the earliest times, and has always been known as hypochondriasis or the hypochondriac disorder, and sometimes as the "spleen." It might aptly be described by the term "misery." It is not pain; bodily pain is not misery, for you often see patients cheerful and even jocose, though daily racked with pains which might almost bring tears into your eyes to witness. Misery is worse than pain; it is a terrible infliction, as those who have experienced it know well.

In these cases there is no perversion of the understanding such as frees the insane from the responsibility of moral agency. Indeed, the average intellectual capacity in hypochondriacs is not below but rather above the general standard. Without any sufficient reason for such conduct, and without any signs of intellectual impairment, the patient concentrates his attention on some particular organ of the body and imagines that it is seriously diseased. He is constantly tormenting himself—and others too, for the matter of that—by dwelling upon his miserable condition, and suffers from the incessant dread of the existence of some serious malady, with perhaps a fear of impending death or insanity. He may fulfil his ordinary duties creditably, but, as a rule, is preoccupied with his own condition, to the exclusion of all other interests and affections, and is ever writhing under the petty despotism of an imaginary evil. Many a hypochondriac might exclaim with Hamlet:—"I have of late (but wherefore I know not) lost all my mirth, foregone all custom of exercises; and, indeed, it goes so heavily

with my disposition, that this goodly frame, the earth, seems to me a sterile promontory ; this most excellent canopy, the air, look you—this brave o’erhanging firmament, this majestic roof fretted with golden fire—why, it appears no other thing to me than a foul and pestilent congregation of vapours.”

Hypochondriacs generally present a healthy appearance, and sleep and perform their ordinary functions well. They go “the round of the doctors,” if they can afford it, and are always changing their medical attendant, being particularly anxious to try any new drug that may for the time be fashionable. They take a strange delight in talking about their ailments, and are very fond of using scientific terms, without, however, always quite understanding what they mean by them. A curious feature is that although they do their best to nurse their malady, they always appear to be most anxious to get rid of it, and have an unlimited faith in medicines, notwithstanding repeated failures in treatment. Perhaps the most vivid picture extant of a hypochondriac is contained in the autobiography entitled “Grace abounding unto the Chief of Sinners,” being the history of the feelings of “God’s poor servant, John Bunyan,” as he styles himself.

The precise symptoms complained of vary much, and they are liable to change from time to time. Often enough there is a great but indescribable sensation of uneasiness in the chest, or there is a burning pain at the pit of the stomach. A very common delusion is that there is consumption or fatal heart disease, and a little indigestion and consequent palpitation may serve to keep up this idea. In the case of persons whose family is strongly tainted with insanity these delusions may assume a far more serious character, and the patient may believe, for instance, that his stomach is full of tadpoles, or that a serpent is writhing about in his entrails. The judgment may even become affected to such a degree that the patient entertains most preposterous ideas, as that he is made of glass, and is in constant danger of being broken, or that he is being magnetised, or that people are conspiring to poison him. The wife of a tradesman believed that she had become solid, so that there was no room for any food, which, nevertheless, she continued to take. An idle country gentleman was convinced that some stones that had been thrown in his face weeks before had gone down his stomach, and could be heard rattling about in his inside. These can hardly be regarded as simple cases of hypochondriasis, and many of these people ultimately become insane.

Hypochondriasis is pre-eminently a disease of adult and middle life. It is hardly ever seen in young people, and rarely makes its first appearance after the age of fifty. It is confined almost exclusively to men, and in women is for the most part replaced by hysteria. Beyond all other circumstances that favour its occurrence is the existence of a strong hereditary taint of insanity. No station in life gives immunity from hypochondriasis, but it is most frequently met with in those who, having retired from business, find the time hang heavily on their hands for the want of some active employment. So also those who from their social position have not been brought up to any occupation suffer greatly; those accustomed to sedentary pursuits, who neglect to take sufficient exercise; and those again who overwork themselves mentally, or who suffer from prolonged anxiety or strain. Reading men at the Universities are often tormented with great depression of spirits; often the conscience is over-sensitive, and the importance of becoming distinguished is exaggerated. Disappointment, loss of wealth, loss of husband, wife, children, friends, of health, character, or social position, are often assigned as causes of hypochondriasis, and in many cases the complaint appears to have originated in the moral collapse consequent on an over-exhausting labour, or on the sudden revelation to the mind of an idle man that his time has been wasted, and that he is a mere burden on the face of the earth. The intellect of a hypochondriac is usually of a superior order, thus Shakespeare makes Hamlet, who may be regarded as a good type of a hypochondriac, a courtier, soldier, and scholar, "the observed of all observers."

A hypochondriac should be encouraged to engage in some active work. Probably the best thing that could happen to him would be to fall in love with someone—besides himself, that is.

The great thing is to have an object in life, something to work at, something you can throw your whole energy into, heart and soul. Anyone who has a tendency to be hypochondriacal should not be allowed to read medical books of any kind. If once he gets into the hands of a designing quack, there is no end to the mischief that may be done. Those little pamphlets that are thrust into your hands in the street should be systematically rejected. The tale they tell is so plausible that he must be a strong-minded man who can read them with impunity. The best thing, and the safest course, is to have nothing to do with them.

Then there is another thing; if a man is hypochondriacal it is

of no use trying to laugh him out of it, for you will not succeed. What he wants is help and encouragement, and not "chaff."

A patient who is hypochondriacal should never live alone, and certainly should never have his meals by himself. If he is a bachelor the sooner he joins a good sociable club where he can make friends the better.

When the appetite is poor it is important to improve it by quinine (Pr. 9, T. 63), gentian and soda (Pr. 14), infusion of calumba or quassia, or something of the kind, taken, of course, before meals.

When there is indigestion, with constipation and sluggishness of the liver, *nux vomica* (T. 57), is the best remedy; from five to ten drops of the tincture may be given in half a tumbler of cold water three times a day.

Flatulence is often complained of, and three drops of cajeput oil taken on a piece of sugar occasionally will move the wind better than anything, or the "soda mint" tabloids (T. 72), may be tried.

When there is anæmia (*see* ANÆMIA) it will have to be removed by iron, which, if preferred, may be taken in the form of one of the natural mineral waters, such as the "Levico."

When there is failure of strength, cod-liver oil is useful. When it cannot be borne, cream, butter, or some other form of fat, will often agree better for a time. The Kepler solution with cod-liver oil is an excellent preparation, and so is the Kepler extract with iodide of iron. Fellows' syrup of the hypophosphites taken three times a day will do much to remove the feeling of depression.

Sea-bathing proves especially beneficial, and when it cannot be obtained it will be found a good plan to put a handful or two of sea-salt into the bath in the morning.

When constipation is the chief trouble it should be remedied by a plentiful supply of vegetables and fresh fruit, rather than by medicines. There is, however, no objection to the use of the anti-constipation tabloids (T. 3), with an occasional dose of Hashra tea at bedtime.

It is essential to obtain natural, quiet sleep, to procure which the bedroom should be fairly large and well-ventilated, and the bed should be free from drapery. There must be sufficient, but not too much, clothing. If there be restlessness, it may be relieved by a tepid bath the last thing before going to bed, or perhaps by briskly rubbing the skin all over with a rough towel. Another good remedy for this condition is bromide of sodium, three of the tabloids

(T. 19) being dissolved in water, and taken at bedtime. Rest is important, but it is seldom necessary to take more than nine hours' sleep out of the twenty-four.

The hair should be kept short, and the teeth should be well cleaned night and morning. Dumb-bells are useful, and some authorities recommend that their weight should be in proportion to that of the individual using them, as pounds to stones. Thus a man of ten stone should select instruments each weighing five pounds. When the muscles are weak and ill-developed, very light dumb-bells—one or two pounds—should be used to begin with, till the heavier weights can be borne.

Their use gives flexibility and tone to the muscles, and promotes general activity. Should club exercise be preferred, wooden bats are to be selected, about two feet in length, and each weighing from three to nine pounds, according to the strength of the individual.

HYSTERIA—HYSTERICIS.—A fit of hysterics may occur in a great variety of forms, but the following may be regarded as the description of a bad attack. The patient has been "put out," or "upset" about something. She begins talking vehemently and unreasonably, and becomes greatly agitated. She laughs or cries, or perhaps exhibits a combination of both. She is probably more or less aware of her condition, and of the notice her conduct is attracting, and she may, perhaps, apologise for or lament her weakness. Suddenly she loses all self-restraint, and seems entirely to abandon herself to the intensity of her feelings. She gives a cry or a scream, and falls down, throwing her arms about in a disorderly manner. She makes a great noise, utters incoherent sentences, sobs violently and repeatedly, and complains of her throat, her stomach, or breath. After a time she seems faint, or exhausted, or "worn out," and then gradually "comes to herself" again. These paroxysms vary greatly in different cases, not only in their severity, and the symptoms they present, but also in their duration. Sometimes it is "all over" in a minute or two, and the patient gets "all right" again, but more commonly this condition continues more or less for an hour or two, or, perhaps, the whole afternoon. After the paroxysm the patient commonly voids a large quantity of pale limpid urine, looking almost like water, and this is sometimes discharged during the fit.

At first sight this may appear somewhat like the description of an

epileptic fit, but in reality very little difficulty is experienced in distinguishing between these two conditions. We have already pointed out the means of making the diagnosis (*see* EPILEPSY). It will be seen that in hysteria the onset of the attack is less sudden than in a real fit; the patient gives some kind of warning, and if you have had any experience of such matters, you will know pretty well what is going to happen. A young lady in hysterics takes good care not to fall unless there is someone by to catch her, or at all events to condole with her after she has fallen, and she is, moreover, especially careful not to fall in an ungraceful attitude, or to damage her clothes in falling. Of course there are exceptions to this rule, for some people go into hysterics regardless of expense. It will be noticed that an attack seldom comes on at night, or when the patient is alone. Then, in hysteria, unconsciousness is seldom complete; you may think the patient is quite insensible, but if you are rash enough to make any uncomplimentary remark, you will find that appearances are deceptive. In an hysterical fit there is never that frightful distortion of the countenance that one meets with in epilepsy. The pupils are quite natural, and are never dilated. The eyelids may quiver, or the eyeballs may be turned upwards, but there is no squinting, and the eyes never remain wide open with a ghastly stare. It is obvious that the patient can see, for the eyes are often directed towards someone standing near, and then rolled up again under the eyelids. The tongue is not bitten, although there may be a great deal of spluttering, and foaming at the mouth. The attack is often followed by exhaustion, but never by stupor.

When the fit is more severe than we have described, it is, probably, not a case of true hysteria, but a combination of hysteria and epilepsy. These mixed cases are not common, but they are occasionally met with. In the majority of instances the attack is less severe than we have described. Although these fits constitute the most characteristic feature of hysteria, they are by no means essential to its existence. Many people are distinctly hysterical, but never have a fit of hysterics. We often meet with young women who, from their hysterical tendencies, are a source of constant anxiety to their friends, but who, nevertheless, never have any definite outbreak.

For the better understanding of that condition which we call hysteria, it will be convenient to consider in detail the circumstances that favour its production.

It occurs almost exclusively in the female sex, but still we meet

with it every now and then both in men and boys. Thus the case is recorded of a young doctor who was distinctly hysterical. He was exceedingly attentive to his own sensations, and fancied that he laboured under a number of diseases that had no existence but in his own imagination: he showed great uneasiness and infirmity of purpose; was what is called "very nervous," and had occasional outbursts of choking tears and laughter, exactly resembling those so frequently met with in the other sex.

In women hysteria generally makes its appearance about the age of sixteen, or from that to twenty. When once established it may last for years—in fact, for a life-time. When it occurs in men, it generally begins later—about the age of forty. In them it is usually the result of over-work or excessive worry and anxiety, and that is about the age at which these begin to tell. There is often considerable deterioration of health, an impaired nutrition, and a feeble circulation, with exhausted brain.

Hysteria occurs in all conditions of life, but it is more frequently met with in the unmarried than in the married, although it is by no means confined to the former. It was at one time thought that this preponderance of hysteria in single women showed that it was in some way connected with the womb, but this idea is now pretty well exploded. Its more frequent occurrence in single women is probably rather the result of their social surroundings. A woman, if not married, has, as a rule, very little to do—at all events, in the middle and upper classes of society. She has no housekeeping to attend to, no children to look after, nothing, in fact, to occupy her mind and rouse her out of herself, and this condition is pre-eminently favourable to the development of hysteria. On the other hand, a wife with a family has a good deal to occupy her attention, in fact, she is more likely to be overworked than not; she has to think of other people besides herself, and an attack of hysteria finds no place in the routine of her daily duties. An active employment and hysteria seem almost to be antagonistic.

Many women who are hysterical exhibit some disturbance of the menstrual function, but then, on the other hand, many women are irregular in this respect without exhibiting any tendency to hysteria, so that these two conditions obviously do not of necessity stand in the relation of cause and effect.

There is no evidence to show that hysteria is hereditary, and this is no more than we should expect considering that it occurs with the greatest frequency in the unmarried.

The determining cause of an outburst of hysterics is usually some mental or moral disturbance, often enough some trivial circumstance, which, taking the individual by surprise, overcomes her power of self-restraint.

We now pass on to the consideration of other symptoms which are usually present in cases of hysteria.

There is often a perverted mental condition, and a marked inability or indisposition to exert the will. The patient believes that she cannot do certain things, and so confident is she in the correctness of her belief that practically she cannot do them. Perhaps, for example, she takes it into her head that she has lost all power over her legs. She asserts this strongly, and believes it so firmly that she fails to make the requisite effort to move them, and the result is that she is to all intents and purposes paralysed. But often, under the influence of some unexpected idea or emotion, or sensation, the effort is made, and the very thing is done which a moment before was believed to be impossible. "A patient may be carried into the room, and may fall when left for a moment to herself; tell her to walk, and a wooden doll seems as capable of movement; but under the stimulus of a wish that what she is saying should not be overheard, she walks to the open door and closes it. Certain ideas seem rampant in her mind; she cries about them, and gesticulates in the wildest manner; tell her to be silent, to keep them to herself, or to control her feelings, and you find them exaggerated, and she affirms that 'all the world shall hear' what she has to say; but a gentle tap at the door, that may come from the hand of someone from whom she wishes to conceal her state, is sufficient in a moment to hush this stormy talk, to compose her face, to dry her eyes, and make her speak and smile with placid composure. Sometimes she speaks in a whisper only, and if asked to 'exert herself' or 'make an effort,' so that some particular friend who is a little deaf may hear what she has to say, the only effect is that the whisper becomes quite inaudible—that she makes less sound than ever, and often none at all. She moves her lips, but not even the ghost of a sound is heard to pass them; and yet this self-same person may, when no attention is directed to the voice, speak loudly enough to be heard and understood in the adjoining room. The fact seems to be that the will can be called into exercise only by some one dominant idea or emotion, and that it is this which determines the varying phases of the mental state." So says one of our leading authorities on this subject.

This curious condition may, perhaps, be better realised by the consideration of a case related by another writer on nervous diseases. "A young lady," he says, "came under my charge for what was supposed to be a disease of the spinal cord. She had taken to her bed suddenly, soon after striking her back rather gently against the edge of a table, declaring that she could not walk. On examination, I was convinced that there was no disease whatever of the spine, other than that of a purely hysterical character, and I so expressed myself to her. She nevertheless insisted upon it that her spine was seriously injured, and she continued to keep her bed, lamenting her sad fate at being compelled to pass so long a time shut out from the enjoyments of life. There was no paralysis, or even simulation of it, for she moved her legs about freely enough in bed. But one evening her brother, who had long been absent, returned home. She heard the bustle in the house attendant upon his arrival, but all were too busy to pay any attention to her in her chamber upstairs. Suddenly exclaiming, 'I can stand this no longer,' she sprang from her bed, rang for her maid, and, hurrying on her clothes, proceeded downstairs and entered the drawing-room, to the great surprise of all her family."

A very common belief on the part of the victim of hysteria is that she is "not understood." She is very apt to think that everyone is against her, that she is neglected, and that even her best friends are intentionally unkind to her. She entertains an exaggerated belief in her own importance. She is always thinking of herself, and is apt to forget that she is not an equally agreeable object of contemplation to others. Often enough she is despondent and depressed, and she sheds tears profusely, but a few minutes after has forgotten her grief and laughs immoderately without any adequate cause. Laughing and crying alternate with almost ludicrous rapidity, and sometimes even they may co-exist. Often the patient is listless and indifferent to everything of ordinary interest, or she may be absorbed in some trivial occupation. She may exhibit great restlessness, and impatience, with extreme irritability of temper on any attempt being made to control her in any way. It is not uncommon for these patients to display an emotion exactly the reverse of that which would be ordinarily excited. One, for instance, draws the chief prize in a lottery, and begins at once to cry and wring her hands. Another hearing that burglars have broken into the house and stolen the plate and jewellery, sits quietly in her chair, with her

hands folded in her lap, and seems rather to enjoy it than otherwise.

Excited sensibility is another very common accompaniment of the hysterical condition. One patient cannot bear the light; another is distracted by the slightest sound; to a third all ordinary odours are intolerable; whilst to others certain tastes are highly objectionable. Here is an example:—"A middle-aged hysterical woman, whom I saw in the hospital a few days ago, had been lying for weeks with her hand before her eyes 'to keep out the light' of a dull London sky. Bringing a candle before her—the room being so dark from an accidental fog that I could not see the pupils—she shuddered, knit her brows, and held both hands between her and its feeble light. There was no undue contraction of the pupils, and when her mind was distracted to the condition of her front teeth—the light being still close to her eyes—the brows were relaxed, the hands removed, and there was no expression whatever of uneasiness." The same author, in describing another case, says:—"A lady to whom I was speaking lately, in a tone by no means loud, exclaimed in a voice much noisier than mine, and putting her hands to her ears at the time, 'Not so loud! Not so loud!' but a moment afterwards she stirred the fire so vehemently, and made so much noise in the process, that it was positively annoying to myself, and this without appearing to give herself the least uncomfortable sensation."

Illusions and hallucinations are by no means uncommon in hysteria, and may be connected with one or more of the senses. In the majority of cases the patient at once recognises the fact that they are illusions, and nothing but illusions. She sees certain things, but she is aware that they are purely ideal and that they have no actual existence. She does not "believe in them," and they exert no influence over her actions. Moreover, they are rarely permanent, and soon take their departure.

Hysterical people often complain of pain, which is chiefly muscular in origin. It is often experienced in the chest or back, and especially between the shoulders and over the loins. A very common hysterical pain is that occupying some one point in the head: the patient speaks of it as a sensation like that which might be caused by driving a nail into the part. It is often situated just above one eyebrow, and it sometimes comes on every day at the same hour, like brow-ague. Occasionally the pain is experienced in the breast, and a fear may be entertained that a cancer is breeding. Pain in

the joints is a common manifestation of hysteria, and may be mistaken for some serious disease. It has been stated on good authority that among the higher classes of society at least four-fifths of the female patients who are commonly supposed to labour under diseases of the joints labour under hysteria and nothing else. This may be an exaggeration, but at all events it serves to show the frequency with which pain occurs as a symptom of hysteria. "Such pain, wherever it may be situated, usually requires strong adjectives for its description, and the account given of it is sometimes tediously minute. I have heard one hysterical lady enumerate and detail nine different kinds of pain in her chest! Of these some were bearable, some 'intolerable,' others 'agonising,' four or five of them usually appeared together, and were present at the moment of description, and yet the face was calm, and simply conveyed the expression of interest in the description."

One of the commonest seats of hysterical pain is in the abdomen, just below the ribs, and it occurs with greater frequency on the left side than the right. Sometimes the pain is lower down, either in the groin or a little above it, and then, too, the left side is more frequently affected. The pain is an acute—nay, a very acute—pain, and the patient cannot tolerate the slightest pressure on the part, and can barely suffer the weight of the bed-clothes. It is not only the deeper parts, but even the skin and muscles, that exhibit this tenderness. Many a patient has been leeches and blistered under the impression that she had peritonitis, when in reality the symptoms were purely hysterical in nature.

In some cases of hysteria there is complete loss of sensibility over the whole of one half of the body. On that side you may prick them, run needles into them, as much as you like without their feeling it, and what is more, no bleeding follows the injury. This fact was first discovered in the case of a patient in one of the Paris hospitals. On leeches being applied, their bites yielded very little blood on one side, whilst on the other it followed as usual. This loss of sensation is a symptom which requires to be sought for, and, in fact, many patients are quite surprised when its existence is revealed to them. A curious circumstance is that the lost sensibility may, in many cases, almost immediately be restored by the application to the skin of plates of metal, such, for instance, as gold coins. This fact was known and published years and years ago, but it has recently been rediscovered and received by the medical world with considerable *éclat*.

Many of the ordinary processes of life which with the majority of us go on unfelt or unheeded, are keenly appreciated by the hysterical patient. She feels the movements of the heart, the pulsation of the vessels caused by the circulation of the blood, and even the passage of the food from the stomach into the bowels. Many of these people complain of a feeling like a lump in the throat; sometimes it seems as though it would choke them, and an effort may even be made to get rid of it by swallowing a little water or a morsel of bread. We need hardly say that the sensation is perfectly imaginary, and that there is no lump or anything of the kind there. Hysteria is a complaint that may at times stimulate almost every disease under the sun. Sometimes even vomiting of blood may be hysterical in origin. In proof of this, we cannot do better than quote the following case, which rests on the evidence of a physician of the highest eminence in his profession:—"A romantic girl," he says, "was for some months under my care in the hospital with this complaint. She vomited such quantities of dark blood (which did not coagulate, however), as I should not have thought possible if I had not seen them. Day after day there were potfuls of this stuff; yet she did not lose flesh, and she menstruated regularly; and, what was very curious, the vomiting was always suspended during the menstrual period, and recurred again so soon as the natural discharge ceased. I said she was romantic, but I should rather have said that she had that peculiar mental constitution which belongs to hysterical females. She used to write me long letters of thanks for my attention, though I was heartily tired of her; and these were couched in all the fine language of the Minerva press. At last I sent her away, just as bad as when she came into the hospital. Five or six years afterwards she called at my house with a present of some game, and told me she had got married to a hairdresser, and was quite recovered."

We occasionally observe in hysterical patients, especially at the catamenial period, a complete suppression of urine, lasting from twenty-four to thirty-six hours. There may, perhaps, be some uneasiness experienced, and the pulse may be quickened, but after a short time a few spoonfuls of urine are expelled, and the normal state is restored. In other instances, during the lapse of several successive days, weeks, or even months, the quantity of urine secreted in the twenty-four hours may be quite insignificant or almost nil. Occasionally there is complete suppression for days together. When matters take this turn there is superadded, as it were of necessity, another phenomenon, which may be

regarded as the complement of the first, and that is vomiting, the ejected matter presenting the appearance and exhaling the odour of urine. This may go on for weeks or months without any visible disturbance of the general health. Of course, this condition may be feigned, and girls have been known to resort to extraordinary deceit in order to conceal the fact of their having been able and obliged to void it, but in many cases the patients have been so strictly watched that there was no possibility of deception, and no reasonable doubt can be entertained of the truth of the phenomena we have described.

It must be admitted that many of these facts are very difficult to explain, but they are none the less real for that. Many doctors refuse to have anything to do with them, declaring that they fall within the province of Mr. Maskelyne, or Robert Houdin, rather than within that of the physician. That is absurd, and those who are acquainted with the care and accuracy with which observations are now carried on in the wards of our hospitals, know that deception is well-nigh impossible. Many hospital nurses are intelligent, well-educated young women, with sharp eyes and quick ears, and are as incapable as the physicians of countenancing any imposture. More than that, in some cases in which doubts have been expressed as to the reality of the phenomena, the patients have for a time been placed in a straight waistcoat, so that they were powerless to help themselves in any way.

In a case of hysterical suppression of urine, which was in one of the Paris hospitals in 1871, the patient also suffered from contraction of all her limbs. The contraction was as perfect as it is possible to conceive—in fact, it was absolute—persisting night and day, during sleeping and waking, even resisting the influence of sleep induced by chloroform. As her physician says, “Better conditions could not be desired to render surveillance easy. I took care, moreover, to place near her two devoted patients, bed-ridden like herself, who were ready to reveal all if they should discover any trickery. I had there the best possible police, that of women over women, for you are aware that if women enter into any plot among themselves they very seldom succeed. This statement will, I believe, be sufficient to convince you that simulation was impossible.”

There is a group of symptoms, known to doctors as “spinal irritation,” which if not identical with hysteria, is, at all events, closely allied to it. Its nature may be gathered from the following condensed description of a case:—

The patient, an unmarried lady, aged twenty-three, first came under

observation complaining of pains in the head and face, loss of appetite, nausea, flatulence, palpitation, breathlessness, "sinking feelings," weakness, and low spirits. The pain, which was the chief suffering complained of, was sharp and neuralgic in character, and varying in its seat, being sometimes in one part of the head or face, sometimes in another, and generally on the left side only. In the head it was confined to a spot which might be covered with the tip of the finger. Headache, in one form or another, was brought on, or exaggerated, by any effort, physical or mental; it was usually relieved by lying down and keeping perfectly still: it was scarcely ever absent except when faceache had its turn: and sometimes it was so continuous and oppressive as to necessitate remaining in bed for days together. Nausea and sickness were its frequent accompaniment, and vomiting and great prostration were its common termination. In the upper part of the spine there were considerable tenderness and a disagreeable feeling of weight, and pressure there brought on or increased the headache, and induced a feeling of nausea and oppression. The feet were always cold; "chills and flushes" were of frequent occurrence, and so were yawning, sighing, and stretching of the arms. Sleep was often made hideous by nightmare: fits of lowness of spirits and crying, attended by a sense of choking, as from a ball or knot in the throat, and followed by plentiful gushes of pale, limpid urine, were brought on by the most trivial causes, and the manner and appearance were altogether those of an eminently nervous or hysterical person.

These symptoms, it appeared, had their starting-point about twelve years before, in the shock and grief caused by witnessing the death of a brother, her last remaining near relative, in an epileptic fit. Before that the patient had enjoyed fairly good health. Her family history, however, was bad, for in addition to the brother who died in the fit, it appeared that she had lost her father from consumption, and that her mother was then under confinement in a lunatic asylum.

Under the use of a more liberal diet, with ammonia and calumba, and with occasional blisters to the nape of the neck, health was re-established in little more than a month.

A year or so later this young lady again returned to her medical attendant, looking very worn and thin, with all her old symptoms in force, and with cough and difficulty of breathing in addition. The cough was very violent: barking, unattended with expectoration, and often carried on until it ended in retching and vomiting. The difficulty of breathing was chiefly at night: usually it was slight, but now and

then quite asthmatic in character; almost invariably it was accompanied by a sharp pain in the left side, or by severe aching in the left shoulder and down the left arm. An examination of the chest failed to detect anything wrong with the heart or lungs, but pressure along the spine revealed tenderness in the neck and back, and at the same time brought on cough, deep inspirations, pain and throbbing at the pit of the stomach, and a feeling of great faintness and breathlessness. On this occasion a very fair state of health was soon re-established by the plan of treatment which proved successful in the first instance.

Two years later, this lady, then married, again applied to her doctor. For three weeks she had been in bed with her knees bent, and the thighs drawn up tightly against her abdomen. This contraction was unremitting during the waking state, and only partially relaxed during sleep; it was unattended by pain, and could for the time be overcome by slow and steady extension. The headache and faceache had quite gone, and so had the pain at the pit of the stomach, and in the left shoulder and arm; the cough, and difficulty of breathing, and palpitation, were of rare occurrence, the appetite and digestion, and the action of the bowels, were tolerably natural, and the patient now complained chiefly of colicky pains in the lower part of the abdomen, pains often very severe and sickening about the loins and hips, with constant calls to pass water, attended with considerable pain on so doing. The spine was now tender, not in the upper part, but quite low down toward the loins; the pressure over this region brought on colicky pains in the lower part of the abdomen, with an almost irresistible impulse to pass water then and there. Pressure in the upper part of the spine gave rise, not to the marked symptoms produced in this way in the two previous illnesses, but simply to a disagreeable thrill all over the body. There was no numbness or tingling in the legs or elsewhere, but tickling the soles of the feet gave rise to painful spasmodic shocks in the legs, to a disagreeable thrill passing up the body as high as the throat, and to the involuntary escape of a small quantity of urine. The condition of the general health was fairly good, in fact much better than during the two previous illnesses.

It appeared that somewhat more than twelve months before, after having been quite well for the year previously, the patient married, and in due course became pregnant. In the early months of pregnancy, she had much headache, depression, weakness, and sickness: but after a while these symptoms passed off, and everything went on smoothly and satisfactorily until two months after confinement, when her baby died

suddenly. The fretting about her baby brought back the old headaches, the headaches produced great sleeplessness and irritability of the stomach, and then came on a state of uncontrollable fidgetiness which kept her incessantly moving about until her legs, one leg especially, failed altogether, and obliged her to take to her bed, when on the very next morning the leg had become contracted. The treatment on this occasion consisted chiefly in a liberal allowance of food and wine, in repeated blisterings over the spine, and in the administration of bromide of potassium; the result was the cessation of the contractions in about three weeks, and the complete re-establishment of health in about two months and a half.

Tenderness over the spine is always a prominent symptom in these cases of so-called spinal irritation. Often enough, however, it is not complained of until specially inquired after, and now and then its existence is not even suspected by the patient until she is made to wince on the application of pressure. Nervous pains, neuralgias of different kinds, often shifting suddenly from one place to another, are very common, perhaps the most common, symptoms of this affliction. They are often brought on by lifting any weight, by twisting or straining the back, or by any effort, mental or physical; and as often they are relieved, to some extent at least, by lying down. Nausea, retching, and vomiting are also common symptoms, as are spasmodic cough and difficulty of breathing. Palpitation is sometimes met with, often in connection with a feeling of pulsation at the pit of the stomach, throbbings in the temples, heats and flushes, and a tendency to faint. The contraction of the limbs, which formed so conspicuous a symptom in the case we have quoted, is by no means of uncommon occurrence in this form of hysteria. The lower extremities are the parts most frequently affected, but occasionally the arms are also involved. This contraction, which is generally painless, may continue for weeks or months, even during sleep, or there may be occasional intermissions of short and uncertain duration. The onset of the attack is usually very sudden, and the departure is often equally abrupt.

In a case occurring in one of the Paris hospitals, there was contraction of the leg, of at least four years' standing. On account of the misconduct of this patient, her physician gave her a stern admonition, and threatened to turn her out. On the next day the contraction had entirely disappeared. In another instance the patient was charged with theft, and the contraction, which had lasted for

two years, vanished suddenly from the moral shock caused by this accusation.

As a rule, there is no real paralysis of the limbs, and the functions of the bladder and bowel are not interfered with. One of the most remarkable characteristics of this peculiar complaint is the suddenness with which all the symptoms may disappear and be replaced by others.

The victims of this disorder are, with few exceptions, of a distinctly hysterical or nervous temperament. They are very prone to pass under or after any strong emotion or excitement large quantities of pale limpid urine. They usually suffer from sudden and distressing flatulent distension of the stomach and bowels, with loud rumblings and explosions, accompanied by the feeling of a ball rolling about, first in the left flank, and then mounting or tending to mount into the throat, where it gives rise to a sense of choking and to repeated acts of swallowing. At times they suffer from bursts of crying, sobbing, or laughing, and they may sigh and yawn, and stretch the arms, and have fits of convulsive agitation and struggling. Other symptoms from which they frequently suffer are breathlessness, nervous cough, palpitation, throbbing in the temples or at the pit of the stomach, flushes and chills, fainting, hiccup, nausea and vomiting, aversion to food or unnatural craving for it, heartburn, languor and debility, fidgetiness, tremulousness, singing in the ears, and many others of a similar nature.

Whatever the symptoms complained of may be, we suspect that the affection is hysterical if the patient is a young unmarried woman, if her menstrual functions are performed irregularly, and especially if, at some former period, she has suffered from fits of hysteria. Our suspicion is confirmed if we find that these symptoms have existed for a considerable time, without any corresponding deterioration of the general health or strength. When the complaint simulated is some form of inflammation, the thermometer renders good service in enabling us to distinguish between the true and false disease. In real inflammation, there is always elevation of temperature, whilst in its counterfeit presentment there is no fever. Hysterical affections have all a strong family likeness, and this often enables us to decide upon the nature of a doubtful case. Moreover, there is a peculiar expression about hysterical women, impossible almost to define, yet readily recognised when once it has been observed. They crave for sympathy, and always endeavour to make out that they are worse than they really are.

Hysteria, when once established, is a very difficult complaint to cure. The most hopeful cases are those which have been recently established. In young people much may be done to avert a tendency to hysteria by judicious mental and moral training, but when the disease has taken a firm hold of its victim, it often requires a long course of treatment to restore the nervous system to its former degree of stability. It is important to keep the bowels in order by carefully-regulated diet, or, if necessary, by the cautious administration of aperients. (T. 51.)

The cold sponge-bath, exercise in the open air, either on foot or horseback, and the avoidance of hot close rooms, are important elements in treatment. Hysterical girls are often in the habit of sitting up late at night novel-reading, and of lying in bed in the morning; this should be put a stop to without a moment's hesitation. Systematic study should take the place of light literature, a change which works wonders in improving the general mental and moral condition.

There is no one drug that can be trusted to cure hysteria, and each case must be treated on its own merits. The first thing is to endeavour to improve the condition of the general health. When there is anaemia we give iron (Prs. 1—7), and when there is want of nervous energy we rely on quinine (Pr. 9, or T. 63), or nux vomica or phosphorus (Pr. 53 or 54). If there be indigestion or flatulence, we resort to one or other of the remedies mentioned when speaking of those complaints.

Decided benefit is often derived from a course of bromide of sodium (T. 19), and sometimes large doses succeed when smaller have failed.

Valerianate of zinc is a valuable remedy in hysteria. The chief indications for its employment are hysterical spasms coming on, chiefly in the evening, a lump in the throat, a profuse discharge of clear watery urine, great sensitiveness and tendency to shed tears, and neuralgia, especially if situated in the neighbourhood of the groin. The dose is five grains three times a day, and it may be given either dissolved in water or in pills.

Musk and assafoetida are often used in hysteria, but they seldom do much good, at all events permanently.

Now, as regards the "spinal irritation" cases. The application of leeches or a blister to the affected portion of the spine will often do a great deal of good. Cases that have existed for months are sometimes cured in a single day by a good large blister.

As regards medicine, benefit is often derived from the use of the

ordinary tonics, such as quinine, steel, cod-liver oil, and the different preparations of phosphorus.

It is, no doubt, advisable to avoid standing or walking to the extent of producing fatigue, but there is no necessity, except as a very temporary measure, to insist upon the recumbent position being retained for any length of time.

A "spinal apparatus" is seldom or never required.

As regards diet, the great thing is to see that plenty of nutritious food is taken, in conjunction with a little wine or some other alcoholic drink.

During a fit of hysteria there is very little to be done. The patient is in no danger and will come round all in good time if let alone. Her dress should be loosened, she should be prevented from hurting herself by striking the floor or furniture, and she should have plenty of fresh air. Smelling salts should be held under the nostrils; and, if she can swallow, three tabloids of bromide of sodium should be given. Should the insensibility, or apparent insensibility, continue, cold water may be poured on the face. An old writer, speaking of cold water, recommends that its application should be "sudden and lavish," but the great objection to it is that it spoils the carpet. A very good substitute is to dip the end of a towel in cold water, and then flap the face and hands with it pretty vigorously. An attack may often be arrested by closing the mouth and nose with the hand, so that the patient cannot breathe. She soon begins to struggle, and at last succeeds in getting loose, and taking a deep breath, and this often stops the fit. Sometimes the fit may be stopped by keeping up firm pressure with the hand over the painful spot in the groin for three or four minutes or more. A calm manner, the absence of all appearance of alarm, and of either scolding or distressing sympathy, will in many cases bring the paroxysm to a speedy conclusion.

There can be no doubt that often recovery is retarded by injudicious manifestations of sympathy on the part of friends and relatives. Their assiduous tenderness serves only to keep up the craving for attention and interest which is so constant and striking a feature of the malady. In illustration of this fact, a physician tells the story of a lady who had terrified her friends and excited the greatest commotion by threatening to put an end to her existence by jumping out of the window. "When I saw her," he says, "she was strapped down to a bed, and was being supplicated by half a dozen people in the room not to kill herself, to which she was energetically replying that she would. I

loosened the straps, opened the window, and told her to jump out. She walked to the window, looked out for a moment, and then, applying no very polite epithet to me, went back to bed, and I heard no more of her suicidal desires."

In every case of hysteria it is of the utmost importance that, while the value of self-control is inculcated, healthy mental occupation and recreation should be afforded.

Travel is of inestimable advantage, and, above all, association with men and women whose intellects control their emotions, and who are endowed with sound common sense, and that tact and knowledge of human nature which for the purposes of every-day life are of greater value than many other qualities often more highly estimated.

INDIGESTION, OR DYSPEPSIA.—Indigestion is the prevailing and fashionable malady of civilised life. The doctor is more frequently consulted about disorders of digestion, and those connected with eating and drinking, than about any others.

Rightly to understand that condition which we call dyspepsia, it is necessary to have some acquaintance, however rudimentary, with the physiology of digestion. In the natural process of digestion the food is first masticated and mixed with saliva, and then swallowed. In the stomach it is moved about by a kind of revolving or churning action, and is acted on by the gastric juice, which reduces it to a semi-fluid consistence, and converts it into a uniform pulp known as "chyme." It then passes into the intestines, where it is mixed with bile, and with the pancreatic juice, which is secreted by the pancreas, or sweetbread, and closely resembles saliva. The nutritive portion of the food is now taken up by the veins and other vessels, and is by them carried into the blood, whilst the excrementitious part, which is useless for the purposes of nutrition, is conveyed out of the body. The gastric juice is a secretion poured out by and peculiar to the stomach. It is an acid fluid, and to its acid, combined with a substance known as "pepsine," it owes its solvent or digestive properties. The readiness with which the gastric juice acts on different articles of food is in a great measure determined by their tenderness and state of division. By minute division of the food, the extent of surface with which the digestive fluid can come in contact is increased, and its action proportionately accelerated. A weak, dyspeptic stomach acts slowly, or not at all, on solid lumps or tough masses of food. A knowledge of this fact affords

an explanation of one of the commonest causes of dyspepsia, and at the same time suggests the appropriate mode of treatment.

Persons who are subject to dyspepsia should never eat in a hurry, as busy men and those of studious and solitary habits often do. They should be cautioned not to "bolt" their food, which should be well ground in the mill of Nature's own providing. It has been supposed, and the supposition appears feasible, that the increased longevity of modern generations is in some degree attributable to the capability of chewing their food which the skill of the dentist prolongs to persons advanced in life. Tender and moist substances offer less resistance to the action of the gastric juice than do tough, hard, and dry ones, for they are thoroughly penetrated by it, and are thus attacked not only on the surface, but at every part at once. The readiness with which a substance is acted on by the gastric juice is, however, no indication of its nutritive value, for a substance may be nutritious, and yet, on account of its toughness and other qualities, hard to digest, and many soft, easily-digestible bodies contain comparatively little nutriment. It is obvious, however, that a substance which the stomach cannot digest is incapable of nourishing the body, and there is therefore, so far, a necessary connection between the digestibility of a substance and its power of nourishing.

These are not mere matters of speculation, but of actual observation. Some years ago an American physician, Dr. Beaumont, was afforded the singular privilege of looking whenever he liked into the interior of a healthy man's stomach, and watching the process of digestion. This privilege was obtained by what must be regarded, from a medical point of view, as a happy accident. It appears that a young Canadian, Alexis St. Martin, had a portion of the skin, muscles, and ribs of the left side of his body blown away in a gun-shot wound, which laid open the stomach also. He recovered from the frightful injury, but with an open wound in the side which led directly into the stomach. The opportunity was taken, with the patient's consent, of instituting a number of experiments on the process of digestion. Different articles of food were eaten by St. Martin, and the action of the gastric juice upon them in the stomach was carefully watched. It is difficult to over-estimate the value of the information so obtained. In fact, it is to these observations that we owe much of our knowledge respecting the relative digestibility of different articles of food. It was found that beef was more readily digested than mutton, and mutton more readily than either pork or veal. Among the substances most quickly digested were rice and tripe,

both of which disappeared in an hour. Fowls are far from possessing the digestibility usually attributed to them, but turkey is of all kinds of flesh, except venison, the most readily disposed of.

There are certain substances upon which the gastric juice exerts no action, and it should be remembered that whatever goes through the stomach untouched, passes undissolved through the whole of the alimentary canal, and appears in the motions unchanged. The frequency with which such substances as dried currants and apple-pips are passed unaltered is familiar enough to all. Indigestible substances, instead of being at once excreted, are occasionally retained in the stomach, causing pain, indigestion, and irritation for days and days together.

There are many circumstances, besides the nature of the food, which exert an influence on the process of digestion. First and foremost among these is the quantity of food taken; for the efficient performance of digestion the stomach should be fairly filled, but not distended. Dr. Beaumont's experiments showed that a certain bulk was necessary for the performance of healthy digestion. This fact has long been known by practical experience to uncivilised nations. Thus the Kamschatdales are in the habit of mixing earth or saw-dust with the train oil on which alone they are frequently reduced to live, and the Veddahs, or wild hunters of Ceylon, on the same principle mingle the pounded fibre of soft and decayed wood with the honey on which they feed when meat is not procurable. The time which has elapsed since the last meal was taken should, for the effectual performance of digestion, be sufficient to ensure the stomach being quite clear of food. The amount of exercise taken previous and subsequent to the meal is not without its influence, gentle exercise being favourable, and over-exertion injurious, to digestion. Then there is the state of mind, tranquillity of temper being apparently essential to quick and easy digestion. In addition may be mentioned the state of bodily health, and the state of the weather.

This naturally brings us to the consideration of the causes of dyspepsia. These will probably have been in a measure anticipated from what we have said concerning the normal process of digestion. There is no more frequent cause of dyspepsia than an excessive consumption of food. Over-eating, whether it consists in a single surfeit, or in that habitual indulgence, to excess of which so many of us are guilty, is especially injurious. Drinking too much fluid of any kind at a meal is mischievous, by over-diluting the gastric juice and impairing its solvent power. Imperfect mastication of food,

either from carelessness or hurry, or owing to the pain of bad teeth is another cause.

Indigestion may arise from an improper arrangement of the meals: some people, for example, take only one meal in the twenty-four hours, whilst others huddle all their food into the stomach at four or five periods within seven or eight hours, and then leave it idle for sixteen or seventeen hours. The error most frequently committed is that of not allowing a sufficient time to elapse between the meals to permit of the stomach doing its work and getting a proper rest. The stomach is a long-suffering organ, but still you must not impose on its good-nature: it must have time to perform one task before it can set about another. It is just as bad to allow too long an interval to elapse between the meals as too short a one, and many cases of severe and obstinate dyspepsia have been induced by the habit of going without anything to eat from an early breakfast to a late dinner. A very marked effect of long fasting is familiar to all under the title of having "overstayed the appetite," and it has been found that the secretion of gastric juice is greatly diminished by long abstinence from food.

Much has been urged respecting the injudicious admixture of foods as a cause of dyspepsia. Of the frequently injurious influence of a mixture of many different kinds of even wholesome articles of diet there can be no doubt. It is impossible, however, to make any very positive assertion on this point, for within certain limits variety is undoubtedly conducive to health, and the too strict limitation to one or two kinds of food is frequently quite as detrimental as excessive heterogeneous indulgence.

Eating indigestible or unwholesome food is, as everyone knows, one of the commonest causes of dyspepsia. In addition to substances which may be regarded as generally more or less injurious there are many which become injurious only from the circumstances or condition under which they are taken. For example, there are many people who can eat pastry in the middle of the day, but who don't dare touch it for supper or at a late dinner.

Want of bodily exercise, excessive labour, inordinate intellectual exertion, mental anxiety, and general debility, are all prominent factors in the production of dyspepsia. The nervous irritability of many literary and scientific men has its origin in dyspepsia. Sedentary pursuits, with over-mental labour, will soon disturb the digestive functions, for, as has been very justly said, one digests

with the legs almost as much as with the stomach. There can be no doubt that in many cases dyspepsia may be traced to excessive indulgence in tea or coffee, or alcoholic liquors, to the inordinate use of condiments, to immoderate smoking, or even to the practice of taking large quantities of snuff.

We must now consider the symptoms of dyspepsia. They vary very much both in nature and severity, one individual suffering severely when his dinner "disagrees" with him, whilst another experiences merely a slight depression. In chronic cases, however, there will usually be loss of appetite, pain, or a feeling of weight and fulness in the chest or stomach, flatulence or wind, nausea or vomiting, costiveness alternating with diarrhœa, acidity, a furred tongue, and offensive breath. In addition, there may be dull headache, giddiness, and disinclination for exertion. All these symptoms need not, of course, be present in every case, but some of them are sure to be.

The appetite in dyspeptics is very variable. In some it remains but little affected, there being simply a distaste for certain articles of food, whilst in others there is an absolute repugnance to all forms and varieties of food. It occasionally happens that the appetite is absolutely increased, whilst in many instances a persistent sense of uneasiness or emptiness, with constant craving for food, is experienced. More rarely the appetite becomes depraved, the patient not merely craving for aliments of an unwholesome character, by swallowing earth, coals, chalk, and other substances which are not only void of nutritive properties, but are disgusting and even absolutely injurious. Thirst is usually absent, at least, to any abnormal degree. Sometimes there is positively a dislike for fluids, which not unfrequently, especially when taken at meals, aggravate the dyspeptic symptoms.

A sensation of pain or uneasiness in the chest or stomach is a very frequent symptom of dyspepsia. In some cases it comes on mainly when the stomach is empty, and disappears under the influence of a meal; in others it comes on only after food. Sometimes it is more or less persistent, being present when the stomach is empty, and increasing in severity after eating. Sometimes it is experienced immediately after a meal, but it may be delayed for two, three, or even four hours.

Respecting flatulence, or wind, we shall have more to say presently. It is usually a prominent symptom of dyspepsia, and eructation may be for a time almost continuous.

The nausea and sickness of dyspepsia are often extremely distressing.

Vomiting may ensue when the stomach is empty, but more frequently it occurs soon after a meal; occasionally it is delayed for an hour or more. The vomited matter may consist of food, almost unaltered, or of a clear watery fluid, having many of the characters of saliva. Between these two extremes there are all kinds of gradations. The quantity also varies very much, there being in some cases only a few tea-spoonfuls, whilst in others the whole contents of the stomach are forcibly ejected.

Pyrosis, or water-brash, is of frequent occurrence in connection with dyspepsia. It is characterised by "heartburn," or a burning sensation in the stomach, followed by the vomiting, or rather eructation, of a thin watery liquid resembling saliva, sometimes sourish, but usually insipid and tasteless. The quantity of fluid rejected at one time may vary from a mouthful to a pint or more.

The tongue in dyspepsia varies considerably in character, but it seldom or never presents an entirely healthy appearance. When it is habitually clean and moist, neither too florid nor yet too pale, and of natural size, you may be pretty sure that digestion is efficiently performed. When, on the contrary, the tongue is furred, with excessive redness of the tip and sides, or when the whole organ is swollen, flabby, and indented at the edges, there is some interference with the functions of the stomach.

Costiveness is a very frequent concomitant of gastric affections, and this sluggish state of the bowels often aggravates, if it does not produce, dyspepsia. The evacuations may be dry and solid and hard, and are usually very offensive, and whiter in colour than natural. When there is much irritation, diarrhoea may supervene, and when the motions are liquid they are often frothy, from fermentation having taken place.

Palpitation of the heart, irregularity of the pulse, and even fits of asthma may arise from a disordered stomach. Even when the patient does not suffer from distinct asthmatic attacks, there is often a sensation of shortness of breath. The feeling is of a load or oppression in the upper part of the chest, especially across the breast-bone, impelling the patient to sigh or draw a deep breath in order to relieve the sensation, which, however, speedily returns. It is not at all uncommon for sufferers from indigestion to torment themselves with the belief that they have disease of the heart. Dyspeptic patients are particularly liable to suffer from different forms of skin disease, such as nettle-rash and acne, the latter appearing as red spots about the nose and cheeks. The severer forms of indigestion, especially when there is much sickness,

are often attended with considerable debility and emaciation. In fact, the loss of flesh will sometimes rival that met with in cancer or consumption.

We must not conclude our account of the symptoms of dyspepsia without referring—however briefly—to the mental condition which it engenders. We all know, many of us from personal experience, that indigestion interferes with intellectual work, and impedes the expression of thought. The habitual dyspeptic often exhibits great lethargy, which may become so great as to cause him to be incapable of even the slightest mental exertion. After meals he usually experiences an invincible desire to sleep, and exhibits an insurmountable repugnance to move. He often displays a marked degree of nervous irritability. He is low-spirited, and his low spirits may vary from slight dejection and ill-humour to the most extreme melancholy. He is frequently morose, and so irritable that he cannot bear to be thwarted in the slightest degree, either by word or deed. He misconceives every act of friendship, is suspicious of those who desire to serve him, and exaggerates slight ailments into substantial grievances. In fact, the confirmed dyspeptic makes anything but a pretty picture. The mental condition so often associated with dyspepsia did not escape the acute observation of Sydney Smith. Referring in his characteristically humorous way to the horrors of indigestion, he says:—

“The longer I live the more I am convinced that the apothecary is of more importance than Seneca, and that half the unhappiness in the world proceeds from little stoppages, from a duct choked up from food pressing in the wrong place, from a vexed duodenum, or an agitated pylorus. The deception as practised upon human creatures is curious and entertaining. My friend sups late; he eats some strong soup, then a lobster, then some tart, and he dilutes these esculent varieties with wine. The next day I call upon him. He is going to sell his house in London, and to retire into the country. He is alarmed for his eldest daughter’s health. His expenses are hourly increasing, and nothing but a timely retreat can save him from ruin. All this is lobster; and when over-excited Nature has had time to manage this testaceous incumbrance, the daughter recovers, the finances are in good order, and every rural idea effectually excluded from the mind. In the same manner old friendships are destroyed by toasted cheese, and hard salted meat has led to suicide. Unpleasant feelings of the body produce correspondent sensations in the mind, and a great sense of wretchedness is sketched out by a morsel of indigestible and misguided food.”

Now, as to the treatment of dyspepsia. If you really want to get rid of your indigestion, and we suppose you do, it is not such a very difficult matter.

In the first place you will have to regulate your diet, for without this all your efforts will be futile. The great secret is to take the most easily assimilable food, and at the same time to avoid overloading your stomach. Your food should be varied, but selected for its digestibility.

Three moderate meals a day are usually sufficient unless you are a very hard worker, but sometimes four are necessary. Meat should be eaten at least twice a day. Beef and mutton, and game with the exception of hares and rabbits, are excellent; but pork and veal are very indigestible, and should be avoided. If you like chicken, or sweetbread, or tripe, take them by all means. You must avoid all meats that have been hardened by culinary art or by condiments, and all cured meats such as ham, tongue, sausages, and so forth. Eggs if they agree with you are to be recommended. Fish is not so good, but may be eaten in moderation. Oysters often agree well, but differences in this respect are observed in different individuals, and some people cannot take them.

Vegetables should be by no means excluded from your diet, but a certain amount of caution is requisite in their use. If they cause much flatulence, their place may be supplied by rice or macaroni, or by some kind of fruit, such as grapes or strawberries, or, better still, stewed prunes. Your potatoes should always be well boiled, unless you like them fried or mashed, and they should not be new. Other kinds of vegetables should also be fresh and carefully cooked. Turnips, parsnips, carrots, and Jerusalem artichokes may, perhaps, not agree with you; but you may take spinach, vegetable marrow, beet-root, and young peas and French beans with perfect safety.

All raw vegetables, such as salads, cucumbers, and pickles, must be eschewed.

Bread should not be eaten new. If you cannot get on with the ordinary household bread, try the aërated bread. It is very nice for a change, although few people like it for a permanency. If this does not do for you, you will have to fall back on biscuits or toast. Fresh butter you may eat in moderation.

Pastry is to be eschewed, but light farinaceous puddings—rice, sago, and arrowroot—are digestible enough. Fried dishes are forbidden, and in the same category must be placed shell-fish, nuts, pickles, and cheese. Sugar may be used in moderation, but jams, marmalade, and other

condiments are seldom admissible, except perhaps in the case of elderly people and those habituated to their use. "Things sweet to taste prove in digestion sour;" moreover, they possess very little power of increasing the flow of gastric juice, and are apt to set up irritation.

What ought you to drink? May you take wine or beer, or brandy and water? You would be much better without anything at all, especially if you have been in the habit of taking a good deal. Not good to give it up all at once? Not at all; there is not the slightest danger. Do you not know that the health of even the most inveterate spirit-drinker improves instead of suffers upon the sudden and total abstinence from spirits? But you are not an inveterate spirit-drinker? Quite so; but the principle is the same. Well, if you really cannot do without something in the way of stimulants, we suppose you must have it. Abernethy used to say that nobody could be persuaded to pay due attention to his digestive organs till death or the dread of death was staring him in the face, and he was about right. At all events, we shall have to keep you strictly within the bounds of moderation, and you must not take anything except at meals. What may you have? Well, if you really must have it, it does not matter so very much how you take it—sherry, or claret, or hock, or champagne, just as you like. The best way is to ring the changes on them, if they all agree with you equally well. You must strictly limit the quantity: a pint bottle of champagne, three fair-sized glasses of sherry, or a pint of good claret is quite enough for the day. Raw spirits are strictly forbidden—no, not even your *petit verre*. May you have beer? You may try it if you like, but malt liquors are very apt to produce wind, so do not grumble if you have to suffer for it afterwards. Simple aërated waters, soda or seltzer, often prove very grateful to an irritable stomach. If you take coffee after your dinner, do not taste it for at least half an hour after you have finished your meal.

The following plan of diet is recommended in, say, the case of a gentleman about forty, engaged in business for six or eight hours daily, and troubled with an irritable, revengeful stomach, and no great amount of vital power:—

- 7.0 A.M.—A cup of tea or a tumblerful of equal parts of milk and soda water, or of milk and lime water, or of milk with just a dash of rum or brandy.
- 7.30 A.M.—*To get up.* Cold or tepid sponge-bath, containing sea-salt; brisk rub with rough towel. Dumb-bells or Indian clubs. Dress leisurely. If fine, five or ten minutes' walk in open air.

- 8.30 A.M.—*Breakfast*. One cup of tea or coffee with plenty of milk, or cocoa made with nibs. Sole, or whiting, or the lean of a not over-cooked mutton chop, or one or two new-laid eggs lightly boiled. Stale bread, or toast with a little fresh butter. Watercresses occasionally if they do not cause flatulence.
- 1.0 P.M.—*Luncheon*. Oysters, if they agree, or a slice of roast mutton. Biscuit or stale bread. One glass of dry sherry. If there be little or no appetite, a raw egg beaten up in a glass of sherry, and taken with a biscuit may be substituted.
- 6.0 P.M.—*Dinner*. Cod, sole, whiting, smelts, turbot, or brill. Mutton, venison, chicken, grouse, partridge, pheasant, tripe, sweetbread, boiled leg of lamb, or roast beef. Stale bread. Cauliflower, asparagus, vegetable marrow, French beans, floury potato, or sea kale. Half a wine-glassful of cognac in a bottle of soda water, or two glassfuls of dry sherry or claret. A few grapes, an orange, a baked apple, or strawberries if desired.
- 9.0 P.M.—A small glass of cold brandy and water and a biscuit, or cup of weak tea with slice of bread and butter, or a small cup of gruel or arrowroot.
- 11.0 P.M.—*Bed*. To sleep on a mattress without much covering. The room to be properly ventilated, and a small fire kept burning if the weather is cold.

Such a dietary as this would probably prove too liberal for a person of sedentary habits. We, of course, were presuming that a fair amount of exercise had been taken, and that something attempted, something done, has earned a night's repose.

This is merely a broad outline of what a dyspeptic should take and what he should avoid, but to this, as to all rules, there are many exceptions. Milk agrees capitally with most people, but with some it induces vomiting, diarrhoea, and absolute indigestion, and must then be avoided. No one with a grain of sense would take what he knows will upset him, and anyone who has been suffering for some time with dyspepsia has a wonderfully correct knowledge of the aliments which best agree with him.

It is important not only to refrain from substances which are indigestible, but also to avoid mixing together in the stomach different substances of various degrees of solubility. Hence there are two reasons why it is salutary to dine off one dish. In the first place you avoid the injurious admixture just adverted to; and as to the second, you escape that desire to eat too large a quantity, which is provoked by new and various flavours.

We have already referred to the importance of allowing the stomach time to perform one task before another is imposed upon it. Abernethy always exhorted his patients to allow five or six hours to elapse between one meal and the next, and there can be no doubt that his advice was as much founded in reason as justified in practice. There are very, very

many people who allow a much shorter interval than this between each of the three principal meals of the day, and the effects of such a system are every bit as injurious as those of over-eating. Many delicate people think it is necessary to eat often to keep up their strength, but fail to recognise the fact that when meals are taken frequently they should be small. The injurious effects of eating between the meals cannot be over-estimated. When meat is eaten in tolerable quantities two or three times a day, the addition of milk, eggs, wine, beef-tea, bread and cheese, biscuits, etc., destroys the beneficial effects of all. It should be remembered also that the amount of food required varies with the expenditure of the system, and that a person leading a sedentary, inactive life requires far less food than one who is performing considerable bodily or mental labour.

Attention to general hygienic conditions will do much in the treatment of dyspepsia, although it will seldom effect a cure unless the diet be also regulated.

The sufferer from dyspepsia should take plenty of exercise, especially in the open air. Walking and riding often exert a considerable influence in increasing the digestive powers of the stomach, and in the case of those who of necessity lead sedentary lives in large cities, the use of the gymnasium often proves of the greatest service. Exhaustion, however, is most carefully to be avoided, and after active exercise time should be allowed for the body to cool before food is taken.

The effects of cold or tepid bathing, and the daily use of the hair glove or flesh-brush, are often very beneficial.

Mental distress, mental solicitude, mental toil, and over-much study, are all prolific sources of dyspepsia, and those harassed by care or anxiety, as well as those engaged in absorbing intellectual pursuits, should take their meals in cheerful society. A light heart is a great digester. You will do well to encourage an indolent sense of contentment for some little time after eating, so as not to divert from the stomach the nervous force which is so essential for the due and proper performance of its functions.

A change of scene often does a great deal of good, and a run down to Brighton, or Margate, or Folkestone, or Eastbourne, if only for a few days, may be tried with advantage.

Six weeks among the mountains of Switzerland, or upon the rivers of France or Germany, will often do more towards restoring a dyspeptic to health than a twelvemonth's regimen and physicking at home.

There is one apparently trivial, but in reality extremely important,

point to which we wish especially to call attention. See that your teeth are in good working order, and if they are not, go to a dentist and get them supplemented or replaced by new ones. If mastication is imperfectly performed, all treatment directed to the stomach will be in vain. In a letter which recently appeared in the *Lancet*, a source of dyspepsia was pointed out, which we believe has been very generally overlooked. The writer says:—

“When I was travelling on the Continent last September I lost two of my front teeth, and afterwards another; besides this, one of my back teeth was so tender that I could not masticate with that side of my mouth. This tooth, on my return to London, my dentist, whom I have employed for twenty years, told me would be of no further use to me, and it was extracted.

“I now determined to go to any expense, that for the remainder of my days my mouth and teeth might be in proper order (the upper jaw only being affected). For a month I gave the gums time to harden, then a cast of the upper part of the mouth was taken, and four days before Christmas, everything being in readiness, the new arrangement was placed *in situ*, a perfect fit, quite comfortable. I felt proud of my appearance, and could bite the hardest substance with every tooth in my head; but to effect this there was a gold plate covering the whole of the *roof of the mouth*. I remonstrated against this, and was told that it was of no consequence, that the tongue was the organ of taste, and that it would not interfere with the process of digestion. Now what happened? I masticated perfectly, the saliva mixed with the food, and then went down my throat as though it had passed through a tin funnel. For a few days I felt no evil consequences; but in about a week or ten days I began to get out of order—griping, etc. First the gastric juice went wrong; then there was one day too great a supply of bile, another day too little, and at last none at all—in fact, congestion of the liver. Knowing that nothing will attack this except blue-pill, although I never take medicine, I went home one Sunday evening at seven with a pure blue-pill, and slept soundly for sixteen hours, and after this a mild aperient. The action of the liver and the bile was restored; but still I had no appetite. I tried to tempt it with a good dinner, but turned away from everything, and I have gone four days and a half without food or drink, except perhaps water.

“Having thirty years ago attended lectures in Edinburgh on physiology, including the subject of digestion and dietetics, it now suddenly occurred to me that in covering up what my dentist called

the roof of my mouth he had, in fact, covered up my palate, and I went to him one day at eleven, and then and there insisted that a large piece should be cut out of the plate, leaving what remained in the form of horseshoe, with quite as firm a bearing as before, and freedom of contact between the tongue and the palate. Two hours afterwards I enjoyed my lunch, as I have every meal since; and although after such disorganisation time and attention are necessary, yet every meal I now take is adding to the tone of the stomach and system."

The medicinal treatment of dyspepsia is by no means an easy problem. When the tongue is red and has a raw appearance, and the general symptoms are those indicative of a certain amount of irritation of the stomach, bismuth, either alone or in combination with hydrocyanic acid, is the appropriate remedy. The ordinary dose of carbonate of bismuth is fifteen grains, but a larger dose, say up to thirty grains, may often be taken with advantage. It should be administered suspended in a little water. We have already given a formula for a mixture containing bismuth (Pr. 18), and three minims of dilute hydrocyanic acid may be added to each dose. Bismuth should always be taken about half an hour before meals; it does little or no good if taken on a full stomach. A dose should be taken every four hours. It is especially indicated when nausea and vomiting are prominent symptoms. Should bismuth not succeed, arsenic (Pr. 40) may be tried. A teaspoonful of the mixture, or one of the tabloids (T. 7) may be taken four times a day, shortly before meals. It is a valuable remedy, especially when there is an irritable condition of the stomach or intestines.

When the tongue is large and flabby, and the symptoms generally indicate want of tone in the stomach, bitters are employed. Those most commonly used are the infusions of gentian, quassia, calumba, cascarilla, chiretta, and chamomile, and perhaps absinthe and hop. Quinine is not much used in stomach affections, unless loss of appetite is the prominent symptom. Respecting the relative merits of the different infusions, it may be stated that calumba appears to present certain sedative properties, and may often be administered when the others would be too irritating; and that gentian, in addition to its bitter properties, has also the advantage of being a slight laxative. The dose of the different infusions is from two to four table-spoonfuls, and of the corresponding tinctures, from one to two tea-spoonfuls. They should be taken about half an

hour before meals, the infusions alone, and the tinctures in a wine-glassful of water. The infusions very rapidly decompose, especially in hot weather; but the tinctures, being prepared with spirit, will keep for almost any time. If the infusions are used they should be freshly prepared; there can be no greater mistake than using medicines that are not of the best possible quality.

Alkalies, as we have already seen, have a marked power of increasing the secretion of the gastric juice. With this view, bicarbonate of soda is usually given in fifteen-grain doses about half an hour before meals. It is best administered in combination with one of the bitter infusions. We have already given a formula for a gentian and soda mixture (Pr. 14), but cascarilla or calumba, or any other bitter may be substituted for the gentian.

Acids given about half an hour after a meal are often a great aid to digestion. Weak hydrochloric acid is usually employed for this purpose, it having been ascertained that the natural acidity of the gastric juice is due to this substance. The acids, like the alkalies, are usually given with some bitter infusion. The acid and gentian mixture (Pr. 15) is a good formula, but the gentian may, if thought desirable, be replaced by one of the other infusions. Acids, if given before meals, lessen the secretion of gastric juice, and should consequently always be given after food unless acidity is the prominent symptom.

Pepsin enjoys a high reputation in the treatment of many forms of dyspepsia. It is the active principle of the gastric juice both in man and many of the lower animals. The pharmacopœial preparation is obtained from the stomach of the pig. For the benefit of those who may have to prepare it for themselves, we may briefly explain the process, particularly as it presents no difficulty. The stomach of a recently killed pig is cut open and laid on a board, with the inner surface upwards. Any adhering portions of food, dirt, or other impurity are removed, and the exposed surface is slightly washed with cold water. The cleansed mucous membrane is then scraped with a blunt knife, and the viscid pulp so obtained is spread on a piece of glass or glazed earthenware, and quickly dried in the sun or before a fire. In this way a light yellowish-brown powder is obtained, the dose of which is five grains. It should be given after the two chief meals of the day, either alone or at the same time as the acid mixture. It is a very valuable remedy when the functions of the stomach are imperfectly performed, and is especially indicated where pain or other disturbance follows the

use of animal food. Most chemists keep pepsin tabloids (T. 60), which are a convenient and agreeable form of taking the medicine. Many kinds of pepsin are absolutely worthless. The best pepsin is the Fairchild, which is pure and remarkably active. Sufferers from dyspepsia should ask for this preparation.

The preparation sold as rennet wine is prepared as follows:—Take the stomach of a calf as fresh as it can be obtained from the butcher. Slit it up from one end to the other, and then gently wipe the inside with a clean, dry napkin, taking care to remove as little of the clean mucus as possible. Then cut the stomach into small pieces, the smaller the better, and put it all into a common wine bottle. Fill up the bottle with good sound sherry, and let it remain corked for a fortnight, when it will be fit for use. It is to be taken immediately after meals—a tea-spoonful in a wine-glassful of water, to which if necessary from ten to fifteen drops of dilute hydrochloric acid may be added.

When uneasiness rather than pain occurs after a meal, with a sensation of weight at the pit of the stomach, and indisposition for mental or bodily exertion, it may be inferred that the work of digestion is slow and difficult, from too scanty secretion of gastric juice. In these cases it is desirable to employ those drugs which are known to promote the secretions of the stomach, and for this purpose we may administer before meals either the gentian and soda mixture, or a little ipecacuanha wine. The ipecacuanha is especially indicated when the dyspepsia is associated with constipation, and is characterised by depression of spirits, flatulence, coldness of the extremities, and the food lying on the stomach “like a weight.” The wine should be given in a dose of from five to ten drops half an hour before meals. In this form of dyspepsia, the use of salt, mustard, or cayenne pepper as condiments is not objectionable.

In one form of dyspepsia the pain does not begin till from two to four hours after a meal, but continues for several hours. It is frequently accompanied by pain and tenderness on the right side, and is supposed to be due to an excess of acid in the stomach. At all events, it is speedily removed by a small dose of any alkali, such as fifteen or twenty drops of sal volatile in a little water, or a dose of the gentian and soda (Pr. 14), or bismuth (Pr. 18) mixtures, or a “Soda-Mint” tabloid (T. 72). In a closely-allied form, in which pain is experienced when the stomach is empty, and is relieved by taking food, the same mode of treatment may be adopted.

There is another form of dyspepsia in which the movements of the stomach and intestines are over-energetically performed. The food is no

sooner swallowed than the stomach, instead of digesting it, passes it on into the intestines, where, owing to its crude condition, it acts as an irritant, and sets up diarrhœa. Patients suffering from this disorder have a constant feeling of emptiness in the stomach; this is relieved by food, but no sooner is the meal finished than it returns, and they feel hungry again. There is in this disorder always an evacuation of half-digested food immediately after a meal, and sometimes even before it is finished. This complaint is very common in children from six to twelve years of age. It can nearly always be cured by giving from two to five drops of laudanum (T. 49) in a little water a few minutes before each meal. This small quantity of opium received into the stomach before digestion has commenced is sufficient to quiet and regulate its muscular movements, upon the inordinate extent of which the symptoms are dependent. If a larger dose be given, it not only arrests the muscular movements, but also the secretion of the gastric juice, and so increases instead of calming the disturbed state of the digestive organs. Trousseau attached so much importance to the small dose that he always commenced with a single drop of laudanum, augmenting it if necessary. Should the laudanum fail, an arsenic tabloid (T. 7) may be taken immediately preceding each meal. Belladonna, too, is undoubtedly useful in this form of dyspepsia, although its beneficial effect is less marked than that of opium. As in the case of opium, it is essential that it should be given in small doses—three drops of the tincture of belladonna (T. 9) just before the commencement of each meal.

Many people, especially those advanced in life, suffer from a sensation of sinking or craving at the pit of the stomach. This may depend on want of tone in the stomach or on the general condition of health. If the intestines are not in an irritable condition, cod-liver oil may be given with advantage—say a tea-spoonful three times a day.

In the so-called irritative dyspepsia, where the tongue is furred and covered with scattered red points, a tabloid of arsenic (T. 7) taken shortly before food acts like a charm. This mode of treatment often cures pain after food, vomiting, and other dyspeptic symptoms. It is a valuable remedy.

Dyspepsia is often complicated with constipation, and little benefit would be obtained from treatment until this is removed. In remedying constipation in these cases much care is required to avoid irritation, and only the gentlest and least irritating laxatives, such as Hashra tea or T. 3 or 51 are admissible. When possible even these should be dispensed with, and the action of the bowels, when

not occurring spontaneously, should be daily solicited by an enema of cold water. Friction over the stomach, the wet compress worn at night, protected by a piece of mackintosh, or the use of the cold douche to the abdomen, will often prove useful adjuncts. When medicines are given, rhubarb and aloes are to be preferred to others. The dinner pills (Pr. 65) not only act on the bowels, but considerably increase the digestive powers. Recourse should be had as little as possible to purgative remedies, for it may afterwards become difficult to dispense with their assistance, and their habitual use tends further to exhaust the muscular and nervous power of the stomach and intestines.

Nux vomica (T. 57) is a drug which is frequently used in the treatment of dyspepsia caused by taking indigestible food. It is indicated when the symptoms are pain, tenderness, and fulness of the stomach after meals, heartburn, sour acid rising, flatulence, frequent vomiting of food and bile, a sour or bitter taste in the mouth, and morning headache accompanied by a feeling of disinclination for exertion. It is also useful in the case of people of a sallow, yellowish complexion, who, in addition to the above symptoms, suffer from irregular action of the bowels with ineffectual urging. This, it will be seen, is just the dyspepsia of men of business and intellectual workers, who perform their tasks with hurry and worry, and give neither brain nor stomach fair play. Nux vomica is said to be especially indicated in persons of a dark bilious complexion, who in addition to employing their brains too much, take but a little out-door exercise, eat largely, and drink freely of alcoholic liquors.

Pulsatilla (Pr. 43) is the remedy for indigestion arising from fatty food or pastry, and accompanied by heartburn and frequent loose evacuations. It is indicated in the case of females suffering from deranged periods, particularly when the tongue is coated with a white rough fur, and when there is nausea with little vomiting and absence of much pain.

The Turkish bath is the best remedy for people who, after dining out, suffer the next day from malaise and slight indigestion. In the case of gouty subjects, it is advantageous to combine colchicum with any anti-dyspeptic remedy.

So much then for the medicinal treatment of dyspepsia. We have an almost unlimited faith in the curative action of medicines, but on the principle of *audi alteram partem*, we give the advice of a physician, evidently no believer in drugs, to a long-suffering dyspeptic. It is as

follows:—"1. Take a good stock of the usual medicines for stomach disorders, and go down to Southampton. 2. Go on board the first Peninsular and Oriental steamer for Gibraltar, with return ticket. 3. Throw all the medicines overboard. 4. Live like other people as soon as you have got your sea-legs, and smoke when you can." He adds that in an ordinary case he would almost guarantee a cure, and that "No. 3 is to be especially attended to."

Many of the more prominent symptoms of dyspepsia, such as vomiting, pyrosis, and flatulence, are of such importance that their treatment necessitates a separate and detailed account.

INFLUENZA.—Influenza is an epidemic disorder attended with great depression, chilliness, running from the eyes and nose, headache, cough, restlessness, and fever.

It was called influenza by the Italians, because it was attributed to the "influence" of the stars. In France it is known as the "grippe."

It has received various other names, for it has been known and noticed from the remotest antiquity. Thus we learn that in 827 A.D., an attack of cough spread like a plague over the whole of Europe, and some forty or fifty years later, the army of Charlemagne, returning from Italy, suffered most severely from the same complaint. During the present century some ten or a dozen epidemics have been recorded, the most noteworthy being those of 1803, 1831, 1833, 1837, and 1847. The epidemic of influenza which commenced towards the end of the year 1889, and spread over nearly the whole of the civilised world, claiming in its course many thousands of victims, will be fresh in the minds of many of our readers.

It was formerly supposed that an outbreak occurred regularly once in a hundred years, but during the seventeenth century there were twelve distinct epidemics, from which we may conclude that the intervals are in reality much shorter.

Occasionally the disease is limited to a comparatively small area, but more frequently it invades a large portion of the earth's surface. In some instances so great has been its prevalence that almost all parts of the world have been attacked.

Its onset is in most cases remarkably sudden; thus in the year 1837 it seized upon all parts of the metropolis within the space of a very few days. The rapidity with which the disease affects one great tract of country after another is very remarkable. It has been said of the great

pandemic of 1837 that many countries were "smitten by the disease as if at one blow." The rapidity of the attack is indicated by some of the popular names for the disease. Thus in some parts of Germany it has been called *Blitz-Catarrh* or lightning cold; whilst the French term *la grippe* is clearly derived from or closely allied to the verb *gripper*, which signifies to snatch, and is the equivalent in *argot* of our slang expression "to nab."

It has been observed to occur also at the same time on land and on board different vessels which have had no communication either with the shore or with each other. Often enough it breaks out simultaneously in many different places, but occasionally its progress from country to country is comparatively slow. Thus it usually spreads over the whole of Europe in a few weeks, but it may take six months to do so. In any particular country its progress may also be slow; thus between the invasion of London and of provincial towns, or of Scotland, weeks or even months, have been known to elapse.

A curious circumstance in the history of these epidemics is that they appear to travel or migrate from place to place, and this they do in spite of adverse winds and variations in temperature. In spreading over a large tract of country, influenza has been observed to follow a regular course, usually from north or north-east to the south and west. At one time it was supposed that influenza always travelled across Europe from east to west, and although undoubtedly this is usually the case it is not an invariable rule. It has been known to pass from Chinese Tartary to Russia, Germany, Holland, England, Scotland, France, and then to Italy and the Mediterranean, or to America, in rapid succession. In its course it appears to pass over seas, and has, as we have said, been known to attack ships in mid-ocean.

When it enters a large town it usually remains there from six weeks to two months, but sometimes its stay is more protracted, as at Paris in 1831, where it was prevalent more or less for nine or ten months. Ultimately, however, it generally disappears, and in the intervals of the attacks isolated or sporadic cases never occur. Where it comes from originally no one can tell. Some people think it always exists at some one spot and spreads from there, whilst others maintain that under favourable conditions, whatever those might be, it may originate anywhere. Usually, each nation attributes to its neighbour from whom it derived the disease the unenviable honour of having originated it. Thus, the Italians have called it the German disease: the Germans, the Russian pest; the Russians, the Chinese catarrh, and so on;

these names affording, as will be seen, some indication of its usual tract.

In passing through a country it does not attack all parts of it; most commonly it spares the villages and small towns, but sometimes even large towns escape. It is generally met with in cities before appearing in the towns and villages around. In large cities an outbreak is usually made up of a number of localised attacks, certain streets or districts being more frequently affected than others.

The number of people seized during an epidemic is usually very great. In London, in 1847, it has been calculated that at least 250,000 persons suffered, in Paris between one-fourth and one-half of the population, and in Geneva about a third.

Influenza prevails on every soil and geological formation, and there is no evidence to show that it is in any way connected with volcanic disturbances, as was at one time asserted. It is not, as far as we know, in any way influenced by electrical or magnetic conditions of the atmosphere. A favourite theory years ago was that it was caused by an excessive accumulation of electricity in the animal economy. It occurs at all times of the year, and not especially at any particular season. It is not dependent on cold or sudden variation in temperature, and it is a mistake to suppose that such is the case. It is uninfluenced, too, by moisture, for it is met with in the dry air of Upper Egypt, in the moist air of sea-coasts, and even on the sea itself.

It has been suggested that influenza might depend on the presence in the atmosphere of an excessive quantity of *ozone*. Pure or atmospheric oxygen when exposed to the action of electrical sparks is transformed into an odoriferous matter called ozone, which is supposed to be merely a modified form of oxygen. Most persons who have stood near an electrical battery at the time of its discharge must have noticed a peculiar smell, and it is said the same odour pervades the air during the prevalence of thunderstorms. It is asserted that the inhalation of strongly ozonised air produces a painful affection of the chest—a sort of asthma, accompanied with violent cough, and from this it has been argued that ozone must be the cause of influenza. The conclusion is certainly not justified by the premises, and the fact that the disorder may prevail in a city or town, while a village a mile or two off remains untouched, tells heavily against this theory.

In some cases a thick and acrid fog has shortly preceded or has immediately ushered in the influenza. We are told that the grippe of the spring of 1733 appeared in France immediately after offensive fogs,

“more dense than the darkness of Egypt.” So also in 1775 it is recorded that the disease was ushered in by “thick noisome fogs.” In the same year it visited the shire of Galloway, in Scotland, where “a continual dark fog and particularly smoky smell prevailed in the atmosphere for five weeks, the sun being seldom seen.” It is recorded, too, that in 1782 “the sun was for many weeks obscured by a dry fog, and appeared red, as through a common mist.” In 1837 “a dark fog brooded over the metropolis” during the prevalence of the distemper. It has been observed, too, that during the prevalence of these epidemic catarrhs various species of brutes and of birds have been extensively affected with sickness, while on some occasions prodigious swarms of insects have made their appearance. These statements are worth recording, but too much importance must not be attached to them, for they may be mere coincidences.

The main spread of influenza is not influenced by the wind; it does not move with the same velocity, and it often moves against it. Yet it is probable that in some cases the direction of the wind may have some share in its propagation. Thus we are told that on April the 3rd, 1833, the *Stag* frigate was coming up the Channel, and arrived at two o'clock off Berry Head, on the Devonshire coast, all on board being at that time well. Half an hour afterwards, the breeze being easterly, and blowing off the land, forty men were down with the influenza: by six o'clock the number was increased to sixty, and by two o'clock the next day to 160. On that evening a regiment on duty at Portsmouth had a clean bill of health, but on the following morning so many of the soldiers were affected by the influenza, that the garrison duty could not be performed.

There is very little doubt that influenza is infectious. The rapidity of its spread would, however, seem to negative the idea of there being any connection between human intercourse and the propagation of the disease. We are told that at St. Petersburg, in 1782, 40,000 people were attacked with influenza in a single night, and this clearly could not have been by contagion. Moreover, the epidemics do not seem to follow the great lines of commerce. On the other hand, when it has entered a town in which investigations can be carried on, it has frequently been proved that the first cases have been introduced, and that the townspeople nearest the invalids have been the first to suffer. So also when it breaks out in a house, it often attacks one person after another. In some instances isolation or seclusion of a community, as in prisons, has given immunity; or, at all events, the inmates have not

been attacked. All contagious diseases have a remarkable property, and that is, that after the entrance of the poison into the system, there is a period of incubation or latency during which it lies dormant and produces no symptoms, or, at all events, none of which we are cognisant. This incubative period is supposed not to exist in the case of influenza, which strikes down persons in perfect health almost like a stroke of lightning. In some cases, however, a period of incubation may possibly have existed, but even then it is undoubtedly very short. It is now well known that influenza affords no immunity from future attacks. People frequently suffer twice during the same outbreak, and they are not protected against a subsequent epidemic.

Influenza occurs both in men and in women, and with about equal frequency. It attacks people of all ages; but young children, it is said, are less affected by it than old. Domestic animals—dogs, cats, etc.—often suffer in the same way. In 1827 there was an epidemic of influenza amongst horses, which spread over almost the whole of Europe. At that time influenza prevailed among men in North America, Mexico, and Siberia, but not in Europe. In 1872 there was a widespread outbreak among horses in the United States, followed early in 1873 by a universal prevalence of the disease among the people of North America. In 1880 in Canada and the Eastern States, the horses were first affected and then the dogs, whilst it was not till some weeks later that the disease spread to human beings. For some weeks before the outbreak of 1889 the disease was so prevalent amongst horses in London that the price of cartage in the coal and other markets had to be raised.

Persons in overcrowded dwellings usually suffer more than those who are more favourably situated as regards sanitary conditions. In several instances large schools and barracks have been first attacked, the disease raging there for some days before breaking out in the town around. People living in low, damp, ill-ventilated places are more likely to suffer than others.

The symptoms of influenza are somewhat as follows:—The patient feels chilly, or perhaps shivers; presently headache occurs, with a sense of tightness across the forehead; the eyes become tender and watery; and sneezing and a copious acrid discharge from the nose ensue, followed or accompanied by heat and uneasiness about the throat, hoarseness, a troublesome cough, a sense of constriction in the chest, and oppression of breathing. In fact, the symptoms are those of a very bad cold, to which are added a sudden early and

extraordinary subdual of the strength, and most commonly great depression of spirits.

The debility which comes on at the very onset of the complaint is one of its most striking phenomena, occurring as it does almost instantly, and being apparently so much greater than would have been anticipated from the symptoms it ushers in. Indeed, this rapid and remarkable prostration is more essentially a part of the disorder than the catarrhal affection, which is sometimes absent or imperceptible.

Not unfrequently there are disturbances of the digestive organs: the tongue is white and creamy, appetite and taste are completely lost; nausea and vomiting are not uncommon, and there may be diarrhoea. The skin, at first hot and dry, soon becomes moist, and sometimes exhales a peculiar musty odour.

In some epidemics, profuse perspiration has been a prominent symptom. The patient complains also of pains in the limbs and back, and of much soreness and tenderness in various parts of the body. In a simple, uncomplicated case, the disease runs its course in from eight to ten days, and the patient is convalescent before the end of the following week. Persistent cough and great debility last longer than the other symptoms, and till the patient gets rid of these the complaint is easily renewed. The most frequent complications are bronchitis, pleurisy, inflammation of the lungs, and rheumatism. In some cases delirium is a prominent symptom, and is to be regarded as an unfavourable sign. The cough is usually very severe, and has been known to produce rupture, and to give rise to abortion in pregnant women. The cough, at first dry, is soon attended with thick, stringy expectoration, often tinged with blood.

Influenza is essentially a serious disease, although the mortality varies greatly in different epidemics. In 1837 the death-rate was about 2 per cent., but it may be higher. Although the relative number of deaths to those attacked was so small, the absolute mortality was enormous; and it was calculated that in that year more people died of influenza than died of the cholera which had raged a few years previously. In fact, funerals were for a time so numerous that the resources of the undertakers were stretched to their utmost. One firm alone had seventy-five bodies waiting for interment, and mourning coaches and black horses could not be procured in sufficient numbers to meet the demand. It will be seen that the danger of influenza to the community is great, whilst to

the individual attacked it is comparatively small. Death claims a certain number, but has, so to speak, a very large choice of victims. In cholera it sometimes happens that half the patients die, but then the number attacked is comparatively small.

True influenza is met with solely as an epidemic attacking large numbers of people, and spreading rapidly over the whole of the globe. If we bear this in mind there will be no danger of our confounding it with those local catarrhal affections that occur in all temperate climates almost annually. One thing is certain with respect to influenza, and that is that it does not arise from exposure to cold, or, as we say, from "catching cold."

The very young and the very old bear influenza badly, especially the latter. A writer during the prevalence of the epidemic of 1837 says: "The daily newspaper obituaries have been unusually long, and the ages of the persons whose deaths they announce are in almost all cases great." Frequent delirium, convulsions, and fainting are bad symptoms; whilst as favourable signs may be mentioned copious warm sweats, free expectoration, spontaneous diarrhœa, and a copious red deposit from the urine. People with pre-existing lung disease often bear influenza very badly. Curiously enough, it seldom attacks those labouring under acute diseases until the period of convalescence arrives, when their immunity apparently ceases, and they become just as liable to its invasion as others. Thus it has often happened that a patient labouring under typhus or typhoid has escaped as long as the fever continued, but on the very day convalescence commenced the symptoms of influenza appeared. This is a very unfortunate circumstance, for just as a poor fellow has struggled through an illness of three or four weeks' duration, he is attacked with a new and dangerous malady, which again places him in a situation of imminent danger.

We know of no specific by which influenza can be prevented. Unfavourable hygienic conditions, and especially overcrowding, heighten its prevalence and severity, but persons in the most favourable circumstances may be attacked. It has been thought that those in well-warmed and yet ventilated houses escape best, but this is very doubtful. In one of the last epidemics it was said that persons who took the best care of themselves, who always went warmly clothed and were never exposed to the inclemency of the weather, contracted the disease just as readily as the half-clad labourer who has to undergo daily exposure to the vicissitudes of our changeful climate.

There are certain precautions which may be taken with advantage during the prevalence of an epidemic of influenza. It is well known that good hygienic conditions check the progress of the disease, whilst defective hygienic conditions favour its spread. The sanitary rules which have been laid down for warding off cholera (*see* CHOLERA) are equally applicable to influenza. Every reasonable precaution should be taken to avoid infection. During the last epidemic people were very careless in this respect, and it was no uncommon thing to find dinner parties given in a house, several members of which were at the time suffering from the prevailing disease. Aged people, and those in delicate health should avoid all contact with influenza patients, and as a matter of precaution letters and parcels should be disinfected. Schools should be at once closed on the onset of an outbreak, and information should be given to the Medical Officer of Health. Many people seem to think that ammoniated tincture of quinine and the plentiful use of eucalyptus will protect them, but cleanliness and plenty of ventilation are of much greater importance. The use of the disinfecting solution mentioned in the article on Cholera may be resorted to with advantage.

We now come to the treatment of the disease when it has actually declared itself. Influenza assumes such a variety of different forms, and is attended with such serious complications that it is essential in every case to call in the best medical advice that can be procured. All we can hope to do is to lay down general rules for treatment, which however may have to be modified according to circumstances.

It is of great importance to have the room cool and properly ventilated. As in a common cold, the patient is best in bed and in a warm room. Draughts and chills must be avoided on account of the risk of inflammation of the lungs.

As there is usually complete loss of appetite, it is a difficult matter to get the patient to take much nourishment. Solid food may have to be abstained from for many days. Should beef-tea be given, it should not be very hot, as it will increase the headache and languor.

Plenty of milk should be given, alone or mixed with soda water, as may be most palatable to the patient. It may be peptonised with advantage.

Cold drinks, orange and lemon juice, cream of tartar water, raspberry vinegar, weak citrate of potash, citric acid and water flavoured with sugar, barley-water with lemon-juice, infusion of mallows, and so on, should be given *ad libitum*, and when there is much fever

they should be iced. Weak cold white wine whey often proves grateful.

In the way of stimulants, claret or hock, with seltzer or Rosbach water, is useful, and in the case of people suffering greatly from debility, it is usually necessary to give port wine or brandy.

As soon as the fever begins to subside, the patient should be encouraged to take solid food, although at first there may be little or no appetite.

The air of the sick-room should be kept moist by means of the steam of a kettle placed on the hob, or by putting boiling water into flat, shallow vessels. The inhalation of hot steam several times a day from a vaporiser will prove useful, and the addition of ten or twenty drops of chloroform (V. 5), pure terebene (V. 10), or pinol (V. 11) to the water will subdue the violence of the cough.

Active purgation is to be avoided, but in many cases it is a good plan to begin treatment by the administration of a pill at bed-time (Pr. 61; T. 51, 25) followed by a draught in the morning (Pr. 25). The pill generally brings away copious dark-coloured motions, after which the patient is much better in spirits, and the fever abates. In the case of children a dose of grey powder (T. 43) may be substituted for the pill, or what is even better, an injection of warm water containing a little castor-oil may be administered.

The strictly medicinal treatment will depend very much on the symptoms. A tea-spoonful of ammoniated tincture of quinine in a wine-glassful of water may be given every four hours with safety. Antipyrene is a popular remedy, but must be employed with caution. If there is much restlessness, especially at night, bromide of sodium is the best remedy. Two tabloids should be given three times a day—the last dose at bed-time—followed by a glass of water or some other fluid to ensure their absorption.

When cough is a prominent symptom, linseed-meal poultices should be applied to the chest, back and front, and should be changed every three or four hours, night and day, and oftener if necessary. An occasional mustard poultice, or the application of a mustard-leaf for a few minutes over different parts of the chest, so as just to redden the skin, may do good. Benefit might be derived from painting the chest or back with iodine liniment, taking care not to apply too much. Blisters, as a rule, do no good, and only add to the patient's sufferings.

Immediately the acute symptoms subside, quinine (T. 64) should be given freely.

In some instances aconite (Pr. 38) and gelsemium (Pr. 41) have been tried, and when administered quite at the commencement of the disease, they may be expected to do good. During convalescence iron and quinine (Pr. 11) should be administered, and a very nutritious diet, with port or burgundy, must be employed. Milk in large quantities is useful, peptonised milk and seltzer water being a favourite remedy in Germany.

We can only repeat that in all cases of influenza the attendance of a medical man is necessary, and the sooner he is summoned the better.

ITCHING AT THE ANUS.—This is a far more prevalent complaint than is usually supposed. The fact is, the sufferer, from motives of delicacy, seldom mentions its existence, even to his most intimate friend, and often refrains from seeking medical advice from the same reason. This is to be regretted, for there never need be the slightest hesitation in consulting a doctor about any bodily ailment. It may seem a disagreeable matter to have to mention it to anybody, but it must be done, and you will soon find the doctor thinks nothing of it, and takes it quite as a matter of course.

This painful itching about the back passage is a most distressing malady, and many people's lives are rendered almost unendurable by it. The irritation is, in the majority of cases, worse at night, especially when the patient gets warm in bed. The greater part of the night is rendered sleepless and inexpressibly wretched. Towards morning, irritable and worn out, the unfortunate sufferer falls off into a fitful slumber, from which he often awakens by involuntarily scratching himself. This, of course, makes the part more or less raw, and materially increases the discomfort during the day-time. The more the patient scratches, the worse he gets, although it is very difficult to help seeking the temporary relief it affords. Many people say they would infinitely prefer decided pain to the dreadful and constant itching they have to endure. Nervous, excitable people are often greatly troubled in the day as well as at night, the itching setting in badly after exercise, or on leaving the cold air and coming into a warm room. These unfortunates are practically excluded from society.

In many cases, on examining the part, there is nothing to be seen, but sometimes the skin is thick and rough from the scratching, and sometimes a little eruption may be observed in the neighbourhood.

The disorder is met with both in men and women, but it is not of

frequent occurrence in young people. In some cases it seems to be a kind of neuralgia, but it is often caused by the irritation of piles, by worms, by confined bowels, and in women by arrest of the periods. It sometimes occurs during the later months of pregnancy. It is frequently induced, or at all events kept up, by habits of too free eating and drinking, although it is occasionally met with in persons who are strictly abstemious. It is sometimes induced, too, by particular articles of food; one man gets an attack after eating lobster or crab, another from indulging in salmon, whilst a third suffers only after drinking champagne or ale. Excessive smoking may act as an exciting cause in those who have a tendency to it.

It must be remembered that itching of the anus is a very intractable complaint, and if you want to be cured you will have to practise a certain amount of self-restraint and self-denial. You will have to follow strictly, patiently, and persistently, the rules laid down for your guidance, for if you do not you most assuredly will get no better. You are a stout, full-blooded, well-to-do, middle-aged gentleman, rather fond of the good things of this life than otherwise. Well, we shall have to cut down your diet. You must give up all rich and highly-seasoned dishes, you must eat but little meat, and live chiefly on fish, poultry, vegetables, and fresh ripe fruit. It is no good saying you will not, for if you want to get better you must. You must knock off your beer and your port and your spirits, and confine your attention to light sherry and claret. You may take Vichy or soda or seltzer water as much as you like. You will have to give up coffee, and take tea or cocoa for breakfast. You should take a good long walk every day, and try and get yourself into a slight perspiration. If you are not accustomed to much walking you had better begin with half a mile, and gradually increase it, in the course of a week or ten days, to three or four miles, only be careful not to overdo it. You should take a cold sponge-bath every morning, and a warm or Turkish bath once a week. At bed-time well wash the parts with warm water and yellow soap.

Now as to medicine. Get this mixture made up, and take two table-spoonfuls of it two or three times a day:—Sulphate of magnesia, an ounce; carbonate of magnesia, forty grains; colchicum wine, forty minims; syrup of senna, an ounce; compound tincture of cardamoms, half an ounce; infusion of cherata to make it up to eight ounces. Then take one of these pills every other night:—Plummer's pill, two grains; compound rhubarb pill, three grains. Mix, to make a pill. If you

object to the pill and draught take a dose of Hashra tea every night at bed-time.

After the washing at night, apply calomel ointment freely. This is an officinal preparation, and you can get it from any chemist. You will have to persist in this treatment for some time, and if you do you will probably be amply rewarded.

When itching of the anus occurs in young men or women, a different mode of constitutional treatment will have to be adopted. When there is much debility, cod-liver oil, or Kepler extract may be given internally, in addition to the use of the local applications. When there is anaemia, the different preparations of iron (T. 15, 34 or 65) will have to be used as recommended when speaking of that complaint.

In excitable nervous people, in whom an attack is induced by mental anxiety, over-work, or worry, bromide of sodium (T. 19) is the appropriate remedy. Ten grains of chloral (T. 28) may be added to the nightly dose, and this will usually ensure a good night's rest. In alternation with the chloral, advantage often results from taking half a drachm of conium juice three times a day. This is the full dose, and must not be exceeded. In addition to this, phosphorus (Pr. 53 or 54) or cod-liver oil taken after meals may do good by restoring the shattered nerve-force. Not unfrequently in young people this malady is a kind of neuralgia, and then anti-neuralgic remedies will have to be resorted to. A course of quinine (T. 63), or arsenic (T. 7), or phosphorus (Pr. 53, 54, or 55) may be expected to prove useful.

You should never forget to look out for worms, and if they are present you will have to get rid of them by appropriate remedies. (*See WORMS.*) When the itching seems to be due to piles, they will have to be treated. (*See PILES.*)

You must always remember that the itching is not a purely local complaint, but a part of a general constitutional malady. At the same time, you will not neglect local applications, but will resort to both internal and external treatment.

There are many applications which may be used besides the calomel ointment, and when one fails you will have to try another. Only do not be in too great a hurry to change; give one a fair trial before you go on to the next. The following is a very good formula:—Carbonate of soda, two drachms; hydrochlorate of morphia, six grains: dilute hydrocyanic acid, half a drachm: glycerine, two ounces; water to make it up to eight ounces. Make a lotion. Dab the part frequently. You must

remember that this is a POISON, so that it should be distinctly labelled as such, and should not be left about.

A chloroform pomade sometimes acts admirably. It is made as follows:—chloroform, two drachms; glycerine, half an ounce; lard, an ounce and a half. This to be used frequently. If you do not like the smell of it, tell the chemist to scent it with roses or elder-flowers.

These are all very good applications, but we have by no means exhausted our list. A very useful lotion is one consisting of one part of carbolic acid to a hundred parts of water. Sometimes the skin becomes so red and irritable from the constant scratching that even a weak lotion such as this causes considerable burning and smarting. It is by no means a bad plan to make a small plug of lint, or out of an old handkerchief, soak it in this lotion, and push it up the passage, leaving a part outside to act as a pad.

When there is any suspicion that the itching might possibly depend on some parasite such as the itch or lice, sulphur ointment should be freely applied.

In obstinate old-standing cases it is a good plan to commence treatment by rubbing the parts thoroughly with a solution of nitrate of silver of the strength of two drachms to the ounce. It usually softens the skin and allays the itching.

Condy's fluid, undiluted, is very useful for the same purpose, and should be applied two or three times a week.

A case is said to have been treated most satisfactorily after all remedies had failed by a lotion composed of one part of liquor carbonis detergens to three of water applied freely. Some very obstinate cases had been cured by washing the affected part at bed-time with a saturated solution of borax in water. When the patient is much disturbed at night, bromide of sodium is the best remedy.

However bad the itching may be you should avoid taking laudanum or opium in any form. You may possibly get a night's rest, but you pay for it in the long run, and are almost sure to be worse the next day.

When the irritation is so very great that the patient is almost worn out by want of sleep, a mechanical mode of treatment may be resorted to. Get a plug of bone made, shaped like the nipple of an infant's feeding bottle, and furnished with a circular shield to prevent it from slipping into the bowel; the nipple should be about an inch and a half in length, and as thick as the end of the forefinger. This is introduced into the back passage at bed-time, and retained all night. It is most

efficient in preventing the nocturnal itching, and a good night's rest is almost sure to result from its use. It is recommended, however, that it should be worn only every other night. The idea of this plug was first suggested by noticing the fact that many patients can obtain relief and sleep, when the itching is very bad, only by introducing the end of the forefinger into the bowel and making pressure.

Itching occurring about the front passage in women is usually successfully treated by one of the applications we have mentioned above. The calomel ointment is especially useful, but in obstinate cases it may be necessary to resort to the employment of leeches or blisters to the inner side of the thighs. A strong solution of alum applied several times a day often succeeds when other things have failed. It must not be forgotten that this complaint may depend on irritation of the womb, and the treatment may have to be directed to this organ.

JAUNDICE.—Jaundice occurs as a symptom in the course of many diseases of the liver. It may depend upon various, and very different morbid conditions, the nature of which in any given case is often involved in obscurity.

The word jaundice is derived from the French, *jaune*, yellow. Its technical appellation is *icterus*, the Greek name for a bird with a yellow plumage, the Galbula, or golden thrush, the sight whereof by a jaundiced person was said to be death to the bird, but recovery to the patient. The Latins called it *morbus arcuatus*, from its exhibiting some of the bright hues of the rainbow, and *aurigo*, from its resembling gold. Even nowadays we speak of a person being as yellow as a guinea.

There is never any difficulty in recognising the presence of jaundice, at all events, when well marked. You have only to look at your patient in daylight to see what is the matter with him. By candle or gaslight the yellowness of the skin is readily overlooked, and often cannot be detected at all. The symptoms constituting jaundice may be said to be yellowness of the skin and of the eyes, whitish or drab-coloured motions, and urine having the colour of saffron, and communicating a bright yellow tinge to white linen. There are other symptoms to which we shall have occasion to refer presently. The characteristic yellow complexion of jaundice is owing to the presence of bile in the blood. The deep tint of the urine is evidently derived from the same source. The paleness of the motions is ascribed to the absence of the bile which always exists in natural and healthy excrement.

If there is any doubt as to whether the patient is really jaundiced, or only yellowish from sallowness, you have only to look at the whites of the eyes and the urine, both of which betray the yellow tint of jaundice very early and conclusively. The greenish-yellow colour of countenance observed in that form of anæmia called chlorosis (*see* ANÆMIA) might, on a superficial examination, be mistaken for jaundice. The slightest attention would serve to rectify the error, for in that complaint the whites of the eyes are even whiter than natural, and the urine is normal in appearance. In cancer, and other wasting diseases, the skin often assumes a greenish-yellow, or lemon-coloured waxen appearance; but here again the whites of the eyes have the proper colour. A dusky yellowish tint of the surface is not unfrequently seen in persons who have suffered much from ague; and sometimes also in those whose systems have been poisoned with lead; but this need never be confounded with jaundice. Jaundice has been successfully feigned by soldiers and sailors desirous of obtaining their discharge. The yellow colour of the skin has often been simulated by painting it with infusions of saffron, turmeric, rhubarb, broom-tops, or soot; whilst the colour of the urine has been heightened by taking rhubarb or santonine. The point that puzzles these gentlemen is that they cannot make their eyes yellow—they remain persistently white. Moreover, they cannot stand being washed: a little soap and water, or better still, a weak solution of chloride of lime in water, at once cures their jaundice and reveals the imposition.

The colour of the skin in jaundice varies in different people. The young, and those who are pale and fair, present a bright lemon colour. In those who are florid, or whose cheeks and skin are flushed with fever, the tint will more resemble that of a Seville orange. If the patient be naturally swarthy, or if his visage be livid or dusky through imperfect action of the heart and lungs, the super-addition of jaundice will give him a greenish or olive hue. In old age the colour is usually less livid. Sometimes, in very bad cases of jaundice, the face becomes quite dark in colour, constituting green or black jaundice. Even in the same person the intensity of the colour may vary from day to day, according to the diet, the amount of bile secreted by the liver, and the activity of the bowels and kidneys. The colour of jaundice often remains in the skin for some time after the cause has been removed, and it is important to know this with reference to treatment. It is useless in such a case to continue the administration of medicines which act on the liver,

but the departure of the colour may be expedited by warm baths, and drugs acting on the bowels and skin.

Often enough in jaundice the perspiration is coloured by the bile, so that it stains linen yellow. Sometimes the saliva and tears have been found to be similarly affected. Sometimes the milk is tinged, whilst at others it is not. In one case, a woman with deep jaundice suckled her baby for six weeks without imparting to it a yellow colour, or affecting its health in any way.

Derangement of digestion is nearly always associated with jaundice. It generally takes the form of flatulence, or wind and constipation. In jaundice the bowels are nearly always most obstinately confined. Naturally the bile acts as a kind of stimulus to the intestines, and when it is not secreted in the proper way, there is nothing to make them act. People in jaundice often suffer greatly from the hardness of the motions. They strain and strain, and yet are unable to pass anything. This difficulty may be the starting point of piles.

Itching of the skin, without the occurrence of any eruption, is sometimes a very obstinate and annoying symptom in jaundice. It may be so intolerable as to drive the sufferer almost crazy.

It is an old notion that to the jaundiced eye all things appear yellow. By many this is regarded as a mere poetical fiction, but certainly it is sometimes, though very rarely, a fact. Curiously enough, in one case everything appeared yellow when looked at with one eye, but not with the other.

Jaundice usually induces a condition of general debility and exhaustion, associated with mental depression and irritability of temper. The temperature of the body, provided there be no concurrent cause of fever, is usually slightly below the normal standard. The pulse is often reduced to 50, 40 or even 20 beats in the minute. This slowness of the pulse is particularly noticeable when the patient is lying down; when he stands up the circulation is quickened.

Jaundice, as we have seen, may depend on a great number of different causes. One of the commonest is obstruction of the bile-duct—the duct leading from the liver to the intestine—by a gall-stone. Sometimes the bile itself gets so thick that it blocks up this duct. The bile may even become quite hard, and may ultimately be passed in the shape of a black, gritty powder—very like powdered cinders or coal-dust. Sometimes, curiously enough, a round-worm crawls from the bowel into the duct, and causes the mischief. It

would seem at first sight that such cases must be very exceptional, but they are not so in reality. Worms appear to have a passion for wriggling into any little hole they may find about, and the mouth of the duct affords them a good opportunity of displaying this proclivity. Sometimes the lining membrane of the duct gets inflamed and swollen, and, by obstructing it, gives rise to jaundice. In certain cases the complaint may arise from organic disease, such as cancer of the liver or one of the adjacent organs. Fits of anger, of fear, or of alarm, have been followed by jaundice, and it has also been produced by great bodily suffering, by a severe surgical operation, or perhaps by the dread which attended it. An instance is recorded in which a woman, on an important secret of hers being accidentally disclosed, became in a very short time quite yellow. We remember the case of a medical student who had an attack of intense jaundice which could be traced to nothing else than the excitement and worry of an examination at which he was a candidate. It is said that cases coming on thus suddenly are more serious than when the jaundice arises from a more ordinary cause, and that they sometimes prove fatal.

It has been noticed that jaundice occurs most frequently in hot weather, and it is probable that a high atmospheric temperature, long continued, exerts some influence in producing certain forms of this disorder. Jaundice occasionally comes on during pregnancy, and disappears after childbirth. The pressure of the womb may thrust other organs—a loaded intestine, for instance—against the liver, and so impede the passage of the bile. The little exercise that pregnant women take, and the costiveness that frequently attends their condition, is probably not without its influence.

Children, a few days after birth, frequently become jaundiced. It is seldom attended with any disturbance of the health, and usually passes off in a few days. It has been supposed that this is in reality not true jaundice. The surface of an infant at birth is often enough of a deep red colour, presenting a condition which falls little short of a mild but universal bruise. By degrees the redness fades, as bruises fade, through shades of yellow into the genuine flesh colour. It need never occasion any alarm or anxiety.

How long does jaundice last? It is impossible to answer the question very definitely, as the time is so variable. It may last but only a day or two, or a month or more. In the majority of cases it is all over in a fortnight.

There is rarely any danger in jaundice. The result is nearly always favourable, except when it depends on some structural disease of the liver, or supervenes suddenly on some great mental or bodily shock. In both cases there are grounds for alarm. Intense yellowness of the skin and eyes is often more hopeful than a fainter tinge of yellow. The prognosis is not good in old people, when the constitution is impaired, and there is no obvious cause for the disease, and particularly when the colour of the skin is greenish or approaching to black.

We will now consider the treatment of jaundice. Theoretically, all treatment should be directed to the cause of the jaundice, but as practically we are often unable to find out what that is, we must be content to prescribe for the most prominent symptoms. As a rule we manage to get our patient well without much trouble.

In the first place, the diet must be restricted. There is probably complete loss of appetite, and possibly persistent vomiting. It would obviously be impolitic to load the stomach with food which would be rejected, or would set up irritation. One of the best articles of diet in these cases is milk, peptonised with Zymine powders, and when there is much sickness or nausea, nothing else should be taken. Some people like it alone, but as a rule it is better to mix it with soda water. Half fill a soda water tumbler with the milk, in which a few pieces of ice are floating, and then fill up with the soda water or Rosbach. Of course, a considerable quantity of milk will have to be taken in the course of the day, and it should be taken at regular intervals, say every two or three hours, so as to constitute meals. Many people want brandy in the milk, but they are better without it. Lemonade cannot be substituted for the soda water, as it curdles the milk. When there is no sickness there is no objection to a few biscuits with the milk. Two or three sponge cakes with a tumbler or two of milk and soda water form by no means a bad meal, as we can testify. In some cases a rice or sago pudding may be allowed, but if there is any vomiting it is better to do without it. When even the milk and soda water is not retained, milk and lime water may be tried, one part of lime water to four of milk. If these are rejected, it must be given in very small quantities, commencing with a table-spoonful at a time, and gradually increasing the dose. As a rule in jaundice vomiting is not very troublesome, and if the diet is confined to the milk and soda water no difficulty will usually be experienced.

As jaundice nearly always depends on some form of liver disorder

it is advisable to apply friction over the region of that organ. The hand should be used for the purpose, and not a towel or bath-glove, or anything of that kind. It is as well to employ some simple liniment to rub in, such as amber oil or opodeldoc, although it is the rubbing that does the good. You will find it impossible to do it yourself, for the part should be steadily rubbed, with short intervals of rest for a quarter of an hour, night and morning. In the case of a man living in rooms it is often difficult to get anyone to do it, although of course when a man is married it is easy enough. There is one thing, a shampooer from the nearest Turkish bath will generally come in for half an hour when his work is done for a shilling or two. If the skin becomes tender, or if for any other reason the rubbing cannot be continued, hot fomentations may be substituted. A piece of flannel wrung out of hot water, folded in the middle and covered with a rather larger piece of oil-skin or thin mackintosh will answer admirably. It should be renewed as often as it gets cold.

People with jaundice are generally very low-spirited, and often drowsy, and quite unfit for any mental work. In most cases there is no occasion for them to remain in bed. They should get up late, dress leisurely, and then go in the sitting-room and spend the day lying on the sofa covered with a rug, or sitting in an armchair by the fire. The great thing is to have a novel or two by your side, and drop off to sleep when you are tired. It is of no use trying to see people on business, at least unless it is very urgent; for with all that bile circulating in the system your brain is not clear enough for serious work. A man with jaundice generally feels so frightfully despondent that he is apt to think he never can get over it, and yet it nearly always comes all right in a week or two. The great thing is not to catch cold, and not to return to solid food until you are quite sure you are out of the bush.

Constipation is a very great trouble. For days and days you have no call from Nature, and when you do it is agony. You spend an hour or more over that simple operation, and the motion is so hard and unyielding that it is passed with the greatest pain. Sometimes relief will be afforded by pressing with the hand on the lower part of the back. It is a good plan to take one of the grey powder tabloids (T. 43) every four hours. If after two or three days you obtain no relief from them, try chloride of ammonium—four tabloids (T. 31) every four hours. If you watch your urine day by day, and also the motions when they are passed, you will be able to tell how you are getting on, and whether

the medicine is doing you good. If the urine gets lighter in colour, or if the motions get darker, you are getting better. When it is all over you will probably find it necessary to go away for a change of air, for jaundice is a thing that pulls one down, and takes away all desire for work. It may seem hard to have to go away after losing so much time in the sick-room, but there is no help for it, and it is really economy of time, for if you do not get thoroughly rid of it you are very likely to have a relapse. When once it is quite gone, and you feel well and strong again, there is no reason why it should ever come back.

If the grey powders fail to act on the bowels, and very often they do fail, take either Franz Josef, Friedrichshall or Pullna water. Try half a tumblerful every morning, with an equal quantity of warm water. It is much better to take it tepid than cold.

Should the above mode of treatment fail, we should advise a trial of purified bile from either the ox or the pig. As it is not desirable that it should come in contact with the stomach it should be taken in capsules. These capsules are obtainable from almost any chemist. They usually contain five grains each of prepared or concentrated bile, which, roughly speaking, is equal to about a hundred grains of liquid bile fresh from the gall-bladder. Two or three may be taken as a dose about two hours after meals, when the stomach digestion is near completed, and the food is passing into the intestines. The capsules imbibe moisture in the stomach, and in their soft, swollen condition they probably get broken as they pass into the intestines, so that the bile is landed just where it is wanted.

Flatulence is sometimes very troublesome in jaundice. Cajeput oil, in three-drop doses, on a piece of sugar, will generally bring up the wind, but, on the whole, it is better to take something that will prevent its formation. Ten or twenty grains of wood charcoal, or a charcoal biscuit or two, will often answer this purpose admirably. Creasote—two drops in a pill every four hours—sometimes does well. A tea-spoonful of compound spirit of horse-radish in a little water, or—and this is even better—a tea-spoonful of glycerine, with a few drops of chloric ether, in a couple of table-spoonfuls of peppermint-water, will often quickly relieve this symptom.

The itehiness, which is often a source of great discomfort, will sometimes be alleviated by warm baths, the use of the flesh brush, and the internal administration of twenty grains of bicarbonate of potash, in water, three times a day. Sometimes relief is obtained from acetic acid

batns—half a pint of acid to three gallons of water. A lotion of chloroform (one part), and glycerine (five parts), often succeeds admirably. Olive oil, the calomel ointment of the Pharmacopœia, or lotions made by dissolving two grains of cyanide of mercury, or a scruple of cyanide of potassium, in a pint of water, are also useful. Whatever you do, do not get these lotions mixed up with your medicine, or take them by mistake, as they are very poisonous.

For black jaundice, or malignant jaundice, as it is often called, phosphorus is the remedy. It is indicated when the skin and the whites of the eyes are of a brownish-yellow colour, when there is much prostration, with little bruise-like spots on the body, and when there is scanty, high-coloured urine. The phosphorus may be given in the form of capsules (Pr. 54), each containing $\frac{1}{30}$ of a grain, one every four hours; or from five to eight drops of the saturated solution of phosphorous in ether (Pr. 53), may be given at similar intervals, in a little milk. The phosphorus capsules are, on the whole, to be preferred.

When jaundice appears to have been suddenly engendered by moral causes, the *rationale* of its production is obscure, and the treatment is correspondingly uncertain. The jaundice of new-born infants calls for no treatment, as it causes no inconvenience, and usually passes off in a week or two. For the jaundice of pregnant women, delivery is the natural end, although it may sometimes be removed by the careful employment of aperients.

Should you send for a doctor in jaundice? It is as well to do so, although, truth to tell, you would probably get along just as well by yourself in an ordinary simple case. You are sure to feel very despondent, and it is just as well to have someone to see after you, and make sure that there is really nothing amiss. In the so-called green jaundice, and in jaundice coming on from mental causes, you should certainly have a doctor. If your jaundice lasts over a week, you had better call in somebody, unless you are getting better.

JOINTS—DISEASES OF THE JOINTS.—The majority of the diseases of the joints, from their complexity and difficulty of recognition, require the attendance of a surgeon for their successful treatment. There are, however, a few of the simpler forms that may be fairly considered to fall within the province of domestic medicine. Some information on this subject, with directions for treatment, will be found in the articles on GOUT and RHEUMATISM.

In many chronic affections of the joints the cold douche is an excellent remedy. It may be employed to remove the stiffness remaining after slight injuries or resulting from rheumatism or gout. In the earlier applications it is a good plan to play the water in the neighbourhood of the joint, rather than on the affected part itself. In some instances it is desirable to use tepid water, and in every case the part should be rubbed immediately after the application till they are warm and dry. When stiffness and pain occur in several joints nothing succeeds better than the Turkish bath, and they often succumb to this after resisting all other modes of treatment. Galvanism, too, often does good in these cases. Inunction with cod-liver oil or olive oil for five or ten minutes, night and morning, often effects great improvement, and it may succeed when other measures have failed. Constitutional treatment must not be neglected, and in many cases we have to trust to the influence of good diet and sea air, with cod-liver oil, steel wine, iron, quinine, etc. Some affections of the joints are dependent on a syphilitic taint, and then a course of iodide of potassium (T. 47) will do more good than anything.

When there is fluid in the joint the only course open to you is to go to a surgeon and have the limb put in a splint, so as to keep the joint immovable. Chronic Synovitis is by no means easy to cure, and the patient must not be surprised if he is incapacitated for active exertion for six weeks or even longer.

In cases of stiffness arising from exertion, the part should be well rubbed with tincture of arnica; a drop or two, or a tea-spoonful of the mixture (Pr. 42) being taken internally in water every half-hour or oftener. *Rhus toxicodendron* sometimes proves useful; it does most good when the pains are accompanied by only a slight amount of swelling, and when they are intensified by warmth and motion. Three drops of the tincture may be taken in water every three hours. The internal administration of tincture of bryony (Pr. 49) is often attended with marked benefit; it is specially indicated when the pains are worse on movement. *Pulsatilla* (Pr. 43) proves useful for pains in the joints occurring in women with menstrual derangement.

KIDNEYS AND BLADDER, DISEASES OF THE.—Some of the more important diseases connected with the urinary organs have already been discussed under the heads of BRIGHT'S DISEASE, GRAVEL, and DIABETES, and further information will be found in the article on

URINE. Rules for the treatment of SPERMATORRHEA were given under DEBILITY.

There are few affections of the urinary organs in which there is not more or less frequency in passing water. In many people it arises from simple nervousness or debility. In women, too, it is not unfrequently due to some irritation or displacement of the womb. In children it is common, and directions for treatment will be found under *Bed-wetting* (see DISEASES OF CHILDREN, p. 26). We must now consider what can be done in the case of adults.

For women, especially middle-aged women, who suffer from frequent desire to pass water, or inability to retain it for long, the cantharides mixture (Pr. 47) will be found most useful. It will often give relief even when the symptoms have existed for years. Another useful remedy is tincture of nux-vomica—five or six drops in a glass of water three times a day. Its efficacy may often be increased by the addition of five drops of laudanum to each dose. Ten drops of tincture of belladonna in a glass of water three times a day is another good prescription. The iron mixture (Pr. 1) occasionally proves successful, especially if twenty drops of liquid extract of ergot be added to each dose. In obstinate cases the gelsemium mixture (Pr. 41) may be used. A little attention to diet will often work wonders, for there may be some one special article, such as tea or coffee, which is the cause of all the trouble. It is a good plan to sleep on a hard mattress, and the bed-clothing should not be too warm. At bed-time cold sponging of the lower part of the back will often prove useful.

In cases of prolonged inability to pass water a surgeon should be sent for without delay, as there is danger of the bladder bursting.

LEPROSY—ELEPHANTIASIS GRÆCORUM.—It seems desirable to say a few words on the subject of Leprosy, especially as the publication of the Report of the Indian Leprosy Commission threw considerable light on the nature of the complaint.

The word leprosy is derived from the Greek *λεπρος* meaning "rough." Originally any roughness of the skin was called leprosy, and this is the explanation of the indefiniteness of the word as met with in the Bible, where obviously it is sometimes used to indicate a trivial skin affection, whilst at others it refers to the real disease. In a similar way the word "leper" is loosely applied, the person in many instances suffering from nothing more seriously than a scaly

cutaneous eruption. The term leprosy, as we use it, is synonymous with Elephantiasis Græcorum.

The countries in which true leprosy prevails are briefly India, China, the West Indies, South America, Norway, Sweden, and Canada. It is practically unknown in Great Britain and Ireland. At one time it prevailed in England and took up its abode with us for thirteen centuries, but now it is gone, and we only see imported cases which are reckoned amongst our medical curiosities.

The disease is constantly associated with the presence of a micro-organism which is known technically as the bacillus lepræ.

The beginning of leprosy is very insidious. At first there is nothing more than a feeling of general weakness, lassitude and debility with an incapacity for exertion. This may go on for months and then more pronounced symptoms make their appearance. Spots appear on the skin, usually circular in form, and over these spots or areas there is an absolute loss of sensibility. These blotches extend and coalesce, and after a time the tissues become thickened and distorted so that the patient is covered with rough irregular nodules. The nodules appear chiefly on the face, on the backs of the hands and feet, and on the limbs. On the face they produce great deformity by the enormous thickening of the eyebrows, the nose, cheeks and ears. The very characteristic appearance thus produced is called *leontiasis* from the resemblance to the face of a lion. This is of necessity a condensed and imperfect account of the symptoms presented by a sufferer from this disorder, but it is sufficiently accurate to admit of identification.

Much difference of opinion exists as to the causation of this wonderful disease, and we must content ourselves with giving briefly a few conclusions which may be said to be thoroughly well established.

1. Leprosy is a disease *sui generis*. It is not a form or modification of syphilis or tuberculosis, although, in some respects, it resembles the latter disease. It is hardly necessary to say that it is not produced by vaccination, and has no relation in any way to the introduction of vaccine matter as a preventive of small-pox.

2. It is not hereditary. There is not even an inherited specific predisposition to the disease in the offspring of leprous parents.

3. Although, strictly speaking, leprosy is contagious and inoculable the contagiousness of the disease is so slight that it may for all practical purposes be disregarded. It does not spread amongst members of a family, or from husband to wife, or *vice versâ*.

4. Leprosy is not due to the use of any particular article of food.

It has been said that fish diet is responsible for its origin, but this is not true. In India there are certain castes the members of which are forbidden to eat fish, and yet they suffer from the disease.

5. Leprosy is not due to any particular climatic conditions, nor is it confined to any particular race, or to people of any particular religious belief.

6. Dampness, imperfect drainage, and neglect of sanitary conditions are important factors in the production of leprosy.

7. There is good evidence to show that leprosy prevails chiefly in poverty-stricken areas.

8. Poor and insanitary conditions, bad social surroundings, and neglect of ordinary hygienic measures are the factors of chief importance in the etiology of the disease.

With regard to the treatment of the established disease in the individual there is little or nothing to be done. Feed the people, teach them to be cleanly and observe ordinary hygienic conditions, and above all make them happy and contented, and leprosy will soon be a thing of the past. It must be admitted that a great deal still remains to be done in England even in this direction.

LOSS OF APPETITE. — Loss of appetite is known medically as "anorexia." It is of common occurrence at the onset of many fevers, but usually it is a far more chronic complaint. Nothing is commoner in London than to hear people say that they "have gone off their feed," they "have no appetite," they "do not care for anything," or that they "hate the sight of food." It is often enough associated with a condition of debility and general inaptitude for work. It is by no means uncommon in those who are worried and anxious, and find it difficult to make both ends meet. People who devote too much attention to the brandy-bottle generally find meals rather a trouble than otherwise; breakfast, especially, is a difficulty. These individuals are generally very dainty and fanciful, and when at home grumble at everything that is set before them. They are very fond of abusing the cook for what is in reality the morbid condition of their own digestive organs. Tobacco-smokers, or, at all events, those who smoke in any quantity, are seldom great performers with the knife and fork. Tobacco and opium and alcohol seem all to have the power of deadening the appetite. People who take little or no out-door exercise generally complain that they do not eat well, and no wonder. If a man wants a

good appetite, he must earn it somehow or other. Someone may give him his dinner, but if he is to enjoy it he will have to bring his own sauce in the shape of an appetite.

Irregularity of meals is another common cause of loss of appetite. The stomach appreciates regularity, and likes to have its wants attended to at the proper time. It is curious how in a well-regulated body the desire for food is experienced day by day at exactly the same hour. We all know how dreadfully bad-tempered many people get if their dinner is only five minutes late. It is all very well to say that they are stupid, and should not be put out about trifles, but it must be remembered that it is no trifle to them, and that even a slight delay may give rise to a considerable amount of bodily discomfort. The stomach has been accustomed to receive supplies at certain regular intervals, and if it fails to receive them, it objects most emphatically. Nothing is more likely to spoil the appetite than eating or drinking between meals. You hear a man complaining that he cannot eat his dinner, and you find on inquiry that about an hour before he had three or four dozen oysters, and some bread-and-butter, and a pint of stout, "just to pull him together." It may be thought that this is an exaggeration, but it is not. We have seen it, and we wish we had not, for nothing can be more contemptible than a man who makes a deity of his stomach. We should eat to live, and not live to eat. For people who dine in the middle of the day, lunch is a great mistake.

Many people seem to think that it would be a great hardship to go without food from 8.30 A.M. to 1.0 P.M. They make a good breakfast directly they get up: ham and eggs, and all the *et ceteras*; and then at 11.0 A.M. they go in for bread and cheese and beer, or for the more aristocratic glass of sherry and a biscuit. Somebody once said that "lunch is a reflection on your breakfast and an insult to your dinner," and it is a pity that more people do not bear this in mind. You can never expect to have a good appetite unless you allow a good five hours to elapse between each of the chief meals of the day.

Now a word or two about some of what may be called the curiosities of appetite. Sometimes a mother brings her boy to the doctor, and says she thinks he must have worms, "he is always eating—he is never satisfied." If the boy is strong and well nourished, let him eat by all means, and do not be stupid enough to give him anything to spoil his appetite. We do not suppose he has any worms, and even if he has it does not matter very much. They will not do any harm, and it is only fair that they should have a feast once in a way. At

all events, if they do give any trouble, there is never much difficulty in getting rid of them, and we will speak of the different modes adopted for their expulsion by-and-by. In diabetes mellitus, or sugary diabetes, there is often, as we have already seen, a most inordinate appetite. It is no joke in the case of a poor man. Sometimes they seem as if they would eat almost any quantity, and we certainly should not like to contract for them. Hysterical young ladies often exhibit the most depraved appetites: they will eat almost anything, from slate-pencil to egg-shells. Few people like cinders as an article of diet, but they really seem to enjoy them. Pregnant women occasionally exhibit these vagaries of appetite, and either have, or pretend to have, inordinate longings for particular kinds of food. It is to be feared that these fancies are often fostered by encouragement; at all events, they are less frequently heard of among the poor, who have not the means of gratifying them, than in the higher ranks of society.

What is to be done for loss of appetite? In the first place, it is essential to avoid, as far as possible, any of the circumstances we have mentioned as causes of this complaint. Be regular in your habits; get up early; do not stay out late at night; take plenty of outdoor exercise; have your bowels well open every morning; do not drink much tea; be quite sure that you are not smoking too much, and are not taking more than you ought to in the way of stimulant. It is a great thing if you can dine in cheerful, pleasant society—the example of eating seems to be almost contagious. It is astonishing what a great deal bad cookery has to answer for in the way of exciting a distaste for food. Many a man living in rooms or chambers gets to hate the sight of his dinner, simply because he is so heartily tired of those everlasting chops and steaks. The best thing he can do is to get into a good club, and have his dinner there in a civilised fashion. In London there are nowadays so many different restaurants—English, French, German, and Italian—that if a man cannot manage to get a little variety now and then, it must be his own fault. In some places you can even have your dinner served up to the accompaniment of vocal and instrumental music, which, we suppose, is to be regarded as a stimulant to the mucous membrane of the stomach.

The practice of taking bitters before meals with the view of increasing the appetite is a common one. It is undoubtedly a bad habit, but in certain functional derangements of the stomach an occasional gin-and-bitters or sherry-and-bitters may have its advantages. We may mention, *en passant*, that the custom of taking what has been called

an "epigastric spurrer," is by no means confined to our own country. In France the oysters and chablis or sauterne with which a dinner *bien monté* is preceded, may be regarded as an institution. In Denmark and Sweden dinner is invariably prefaced by a mouthful of caviare, or salt fish, or a dram of raw spirits. In Russia dram-drinking and condiment-eating preparatory to the prandial meal, are customs very widely disseminated, and in the United States we hear that pickled oysters and small cubes of salted cod are frequently to be seen on the marble bars of their palatial hotels, although these latter are probably to be regarded less as incentives to eating than as provocatives to drinking.

Probably the drug most frequently employed with the view of stimulating the jaded appetite is quinine. Two table-spoonfuls of the tonic quinine mixture (Pr. 9) should be taken about half an hour before meals, or one of the tabloids (T. 63) will do equally well.

The infusion of quassia may also be used for this purpose, and its efficacy is greatly enhanced by the addition of three or four drops of tincture of nux vomica. Nux Vomica (T. 57) is one of the pleasantest bitters we know, and will often succeed admirably, even when given in plain water.

Other tinctures and infusions employed for a similar purpose are those of calumba, gentian, chiretta, and cusparia. These infusions should be given in two table-spoonful doses, while the dose of tinctures is a tea-spoonful in water. The tincture of nux vomica, it will be remembered, is a much more powerful drug, and the dose of this should not exceed five drops.

The different preparations of hop are useful, but are, we think, best taken in the form of bitter beer. Absinthe, or wormwood, is largely employed on the Continent.

With many people, especially those who are predisposed to constipation, two or three table-spoonfuls of compound decoction of aloes, or "Baume de Vie," will succeed better than anything. We have given a formula for a "dinner pill" (Pr. 65), which in many cases acts admirably.

For elderly people, the Fairchild Pepsin taken in five-grain doses half an hour before meals is useful.

We need hardly say that for patients who are anæmic, or suffering from what is usually called "poorness of blood," iron is the remedy (T. 15).

LUMBAGO.—(*See* RHEUMATISM MUSCULAR.)

LUNGS—INFLAMMATION OF THE LUNGS.—Inflammation of the lungs is known technically as pneumonia. In this disease the substance of the lung itself is in a state of inflammation; in bronchitis it is the air passages that are inflamed; whilst in pleurisy the inflammation attacks the pleura or membrane covering the lung. In acute pneumonia the fever runs as high, and the whole course of the disease is as abrupt as in many of the eruptive fevers. As a rule pneumonia attacks only one lung, the lower part or base being primarily involved. Occasionally there is inflammation of both lungs, and then we speak of it as being a case of double pneumonia. When pleurisy and pneumonia co-exist, as they often do, the complaint is known as pleuro-pneumonia.

A consideration of the causes of pneumonia may help to throw some light upon its nature and the place it should occupy in the classification of diseases. It is more frequently met with in climates presenting marked and rapid variations of temperature than in those characterised by extremes of heat or cold. Thus in tropical regions it is uncommon during the continued hot seasons, and on the other hand in some of the expeditions to the North Pole, the complaint has been almost unknown. It is said also to be very rare in Iceland. In Egypt, too, it is rare, though bronchitis is common in the valley of the Nile. There is a general opinion that pneumonia is of more frequent occurrence among the labouring than in the wealthier classes of society, and that among the former those whose occupations involve the severest exertion and the greatest amount of exposure are most likely to suffer. In the army the soldiers are more frequently attacked than the officers. The greatest number of cases occur, as might be supposed, during those months of the year in which there are the greatest vicissitudes of temperature, notably in the months of April and May.

Pneumonia attacks both the young and the old, and it is unquestionably a common disease of early life. Men suffer very much more frequently than women, and this is easily accounted for by their increased exposure to climatic and other injurious influences. Opinion differs as to whether pneumonia is more likely to attack the vigorous or those previously in bad health. It must be remembered that the robust are more likely to be exposed to the weather and to changeable climates and temperatures, for the weak and delicate stop at home and take care of themselves. It has been noticed that some people are

liable to repeated attacks of inflammation of the lungs—a peculiarity which may be due either to some special but unknown constitutional predisposition, or to the fact that previous attacks induce a proclivity to their return. The latter hypothesis is probably the true one.

The most frèquent exciting or immediate cause of pneumonia is cold, in some form or other, and in many cases the attack can be distinctly traced to getting wet through, sitting in a draught when heated, or some similar influence. Boys get heated playing football or by some other violent exercise, and then throw themselves down on the grass to get cool, and often enough the result is an attack of inflammation of the lungs. This is more likely to occur, the body being exhausted by the previous exercise. Excessive exertion seems to act as an occasional cause. In many instances pneumonia has been produced by things “going the wrong way” and getting into the lungs in eating or drinking. Inflammation of the lungs is not unlikely to be set up in the course of other diseases, and it is a complication for which we must always be on the look-out. In Bright’s disease, for example, it is not of unfrequent occurrence.

Pneumonia is commonly ushered in by restlessness with general febrile disturbance. At the end of from one to three days there are rigors, soon followed by nausea, cough, pain in the side, distressed breathing, a pulse reaching 140 or even 160 beats in the minute, burning heat of the skin, thirst, loss of appetite, prostration, headache, and sometimes even transient delirium. Not unfrequently the patient describes the succession of his symptoms as shivering, fever, cough, and breathlessness.

The onset of pneumonia is most commonly marked by rigors, which are usually severe, their frequency and intensity being greater in this than in almost any other disease. Pain in the side appears to exist only in those cases in which the inflammation of the lung is accompanied by some degree of pleurisy. This, however, is of frequent occurrence, the pain being commonly felt on a level with or a little below one or other breast, but it may be experienced in almost any other part of the chest. Generally it is most severe at the beginning, and declines by degrees, ceasing altogether for some time before the pneumonia terminates. It is aggravated by cough, by a deep breath, and often by sudden changes in posture, or by pressure made on the ribs. Shortness of breath is also of constant occurrence, although it varies greatly in degree. Sometimes it is so slight that the patient is not conscious of it, and even the physician scarcely perceives it. Sometimes

it is so extreme that the patient, entirely regardless of what is going on about him, seems wholly occupied with respiring, is unable to lie down, and what with the shortness of breath, cough, and pain in the side, can scarcely speak. The number of respirations in a minute is seldom less than thirty, often thirty-five to forty, and they may even reach sixty or seventy. The cough, which is one of the earliest symptoms, is short and hacking, and rarely comes on in paroxysms. It is usually dry at the outset, but in a few hours is accompanied by a peculiar expectoration, which constitutes one of the most certain indications of the presence of pneumonia. The expectoration consists of transparent and tawny or rust-coloured sputa, uniting in the vessel containing it into a jelly-like and trembling mass of such viscosity that the spittoon may be turned upside down and shaken without spilling its contents. This characteristic appearance may perhaps not be noticed for the first day or two, but it is almost always present at some period in the course of the disease. One of the most marked features of pneumonia, and one that will often suffice to distinguish it from other complaints, is the sudden and considerable rise of temperature which marks its invasion, and is usually maintained until the occurrence of the crisis. It is not uncommon for the thermometer to mark a temperature of 103 or 104 degrees within a few hours of the first feeling of illness.

In the majority of cases pneumonia ends in complete recovery. Usually a marked crisis takes place, the temperature falling rapidly to the normal, while the pulse and respiration diminish in frequency and the other symptoms abate, convalescence being soon established. This happens usually from the third to the eleventh day, most commonly about the end of the first week. It is often marked by profuse perspiration or an abundant discharge of urine, and occasionally by diarrhœa, bleeding from the nose, or the development of a skin eruption.

The symptoms we have enumerated will, we trust, enable our readers to recognise the nature of the affection. This is a disease in which the attendance of a medical man is very necessary. It is always serious, especially in the very young, and those advanced in life. Other circumstances which increase the danger are the fact of the patient being a woman, the occurrence of pregnancy, the existence of debility from any cause, previous habits of intemperance, or previous disease of the heart, lungs, or kidneys.

When it is really impossible to obtain medical advice, the following hints as to treatment may prove of service.

In the first place, the patient must be confined to bed.

A fire should be kept burning night and day, even in summer. It is a good plan to have a kettle of water on the hob, the steam from which will serve to maintain the air at a proper degree of moisture.

The window or windows should be opened for an inch or two at the top, to insure proper ventilation, although care should be taken to avoid draughts.

The bed-coverings should be light; and the patient should be well wrapped up, if from any cause it is necessary to get out of bed.

With the prevalence of a high temperature it is of little or no use trying to give solid food. The diet should consist chiefly of milk, of which from two to three pints, or even more, should be given in the course of the day. Many people find that milk is not only more palatable, but is more readily digested, if flavoured with just a dash of brandy, although anything like excess in the administration of stimulants is to be avoided. It is not a bad plan to dilute the milk with an equal quantity of lime water or soda water.

There is no objection to a sponge cake or two, or a few biscuits.

Beef tea may be taken once or twice a day, although it is less nutritious than is generally supposed.

Should the bowels be confined, a simple aperient, such as castor-oil, or malto-ricine, may be given, but it is well to avoid anything like active purgation.

Large linseed-meal poultices applied over the chest and back, and renewed every two hours, or as often as they get cold, prove very grateful.

Moderate quantities of wine, or brandy, somewhat in accordance with the patient's ordinary habits, may be given, should signs of weakness become apparent.

Ice to suck, and frequent sips of cold water, are useful in allaying thirst.

In quite the early stage, aconite is useful in this as in so many other febrile diseases. A drop of the tincture should be given every ten minutes for the first hour, and subsequently hourly for ten or twelve hours. Pr. 38, or T. 1 may be employed. It is most suitable for the first invasion of the cold when feverish symptoms, restlessness, *malaise*, pain between the shoulders or in the chest, and short cough are the prominent symptoms.

A little later, or when the symptoms are more severe, phosphorus is preferable. It is considered to be of most value when there are signs

of exhaustion. A saturated solution of phosphorus in ether (Pr. 53) may be used, and of this a drop or half a drop may be given every hour for ten or twelve hours. It is not unfrequently administered alternately with aconite—first a dose of one, and then of the other.

When the symptoms point to pleurisy as well as pneumonia, bryony (Pr. 49) proves useful. Dry cough, with little expectoration and stitching or catching pains in the chest, are generally considered to be indications for its administration.

Of late years antimony has been much employed in pneumonia, and respecting its value there appears to be a general concurrence of opinion. In many cases, under the influence of this drug, the pain in the side gives way, the expectoration, from being characteristic of pneumonia, changes to that met with in bronchitis; the pulse and breathing are reduced in frequency, and the further spread of the inflammation is checked. To be of much service, it should be given quite at the commencement of the disease, and it is essential that the dose should be small and frequently repeated. A grain of tartarated antimony (tartar emetic) should be dissolved in half a pint of water, and of this one or two tea-spoonfuls should be given every ten minutes or quarter of an hour for the first hour, and afterwards hourly (Pr. 46). Should nausea or sickness be induced, the dose must be lessened. Antimony wine, given in doses of two or three drops in a tea-spoonful of water, will succeed equally well. These are both pharmacopœial preparations, and may be obtained without difficulty.

We can only conclude with the recommendation to obtain medical assistance whenever possible.

MEASLES.—(See DISEASES OF CHILDREN, p. 25.)

MEGRIM, OR SICK HEADACHE.—When speaking of headache generally we pointed out that this especial form was of such importance as to merit a separate and more detailed consideration.

There are several varieties of megrim—or migraine, as the French call it—which are known as hemicrania, blind-headache, and bilious-headache. We cannot convey a better idea of the general features of this distressing complaint than by giving an example. An eminent French physiologist and man of science has recorded his own case, which affords a good illustration of one of the simpler forms of migraine.

He tells, that since about his twentieth year, though otherwise in good health, he has suffered from this complaint. Every three or four weeks he has an attack coming on, for the most part in consequence of some unhealthy influence, such as long and fatiguing evening entertainments, and so on. As a rule some constipation precedes it. The next morning he awakes with a general feeling of disorder, and a slight pain in the region of the right temple, which, without overstepping the middle line, gradually extends itself, reaching its greatest intensity at mid-day; towards evening it gradually passes off. While at rest the pain is tolerable, but it is increased by movement to an extreme degree, and it is aggravated by stooping or coughing. The countenance is pale and sunken, and the right eye small and reddened. At the height of the attack, when it is a violent one, there is nausea, but it rarely culminates in vomiting. As the fit approaches its termination the right ear reddens and becomes very hot. Sleep often shortens the attack, which leaves behind it slight stomach disturbance; frequently also the scalp remains tender at one spot the following morning. For a certain period after a seizure he can expose himself with impunity to certain injurious influences, which before would have brought on the migraine to a certainty.

This, as we have said, is a very simple form of the malady, and in the majority of cases the phenomena are much more severe. Very frequently the pain continues to increase from the moment of onset until it is almost unendurable, and the patient seems almost as if he would go out of his mind. This is often accompanied by an intolerable sense of nausea, and sooner or later by repeated vomiting. The condition is at this time one of great misery and depression, the suffering closely resembling that of a person thoroughly sea-sick. The attack is often accompanied by affections of sight and other phenomena which will subsequently occupy our attention.

Megrim undoubtedly occurs more frequently in women than in men; or, at all events, women apply for relief more frequently than men. The first attack often makes its appearance at the age of seven or eight, or it may be earlier. The age at which the second teeth are cut appears to be especially favourable for its onset. It is not uncommon for women to tell us that the headaches first came on about the age of thirteen or fourteen, "when the periods began." Even in those cases in which the attacks commenced early, and have persisted in a severe form throughout the greater part of life, they are generally found to abate when the patient attains the age

of fifty or thereabouts, and they usually cease completely before the onset of old age. It is rare to meet with this malady in old people, and often the attacks appear to reach a maximum of severity about the age of thirty, after which they gradually decline in frequency. In women the seizures may become more severe about the change of life, and diminish again when the critical period has passed. Megrin is in a large number of cases hereditary, and nothing is more common than for the patient to assure you that it is "a family complaint." In one instance with which we are acquainted, the mother and all four daughters suffer from headache. There seems to be in these cases some inherited condition of the nervous system which favours the development of megrim. Sometimes, however, the children do not suffer from the same nervous affection as the parent, but from some allied disorder. For instance, one member of the family may have megrim, a second may be the victim of neuralgia, a third may be subject to fits, a fourth may be a hay-asthmatic, and so on.

Sick-headache is essentially a paroxysmal or intermittent affection. The malady, it is true, is permanent, and may last a lifetime—we know of a case where it has lasted twenty-nine years—but it is only manifested at more or less distant intervals, in distinct attacks or seizures of well-defined character and limited duration, the sufferer, as a rule, enjoying good health in the intervals. The duration of the paroxysm is in different cases very variable, although, in the same individual, it is pretty constant. In some people it lasts only three or four hours, in others seven or eight, whilst it is not uncommon for it to last the whole of the day. We should say that the average duration was from six to twelve hours. In exceptional cases the suffering continues for two or three days, during which it ebbs and flows, the patient recovering a little, then getting worse again, and so on. A lady recently under treatment assured us that on one occasion she had an attack lasting almost continuously for over a month. The seizures usually subside gradually, generally terminating at night. With some people—a limited number, unfortunately—a very short sleep, say of half an hour's duration, will completely dissipate an attack. Sometimes relief is afforded by vomiting, or by an unexpected action of the bowels, but this is somewhat exceptional. The abrupt transition from intense suffering to perfect health in this malady is very remarkable. "A young woman in the enjoyment of otherwise excellent health, well-nourished, cheerful and active, the life, perhaps, of her family circle, appears in the morning, once in every two or three weeks, a perfectly altered being, with a pale,

inanimate face, dull, lustreless eyes, and with all her usual cheerfulness departed, and so remains throughout the day in a state of chronic nausea, and corresponding mental and bodily dejection, to which use alone has made her resigned; and yet the following morning she will be her former self again, as if nothing had occurred; and thus she may continue to live two distinct lives, as it were, perhaps for a long series of years."

The duration of the interval or period of freedom is also variable in different cases, though there is some approach to regularity in the same individual. Some people have an attack every fortnight, others every month or two months, and so on. With many women sick headache recurs at every monthly period, with some commencing a day or two before, and in others following it. The attack, however, seldom returns with the same regularity as does, for example, a fit of ague. In ague the patient can often tell almost to a certainty when the seizure will occur, but in megrim all he knows is that should he exceed his usual time, he is not likely to remain free for many days. After an attack the patient usually feels certain that he will not be troubled for some time to come. Curiously enough, a sort of compensation is sometimes observed between the severity of a seizure, and the degree of immunity which precedes or follows it. Many people are not anxious for long intervals between their attacks, for they recognise the fact that they have a certain amount of suffering to go through, however it may be broken up or divided, and they would as soon have it regularly as not. In the majority of cases the exact time of the onset of an attack is determined by some apparently trivial circumstance—such, for instance, as a little indigestion or even confined bowels. Some articles of food are especially likely to bring it on, and among those most commonly credited with this property are butter, fat, spices, and alcohol in any form. One gentleman, the subject of megrim, says that for over thirty years he has not been able to take the smallest quantity of wine, not even the sacramental wine, without suffering from an attack. A patient, a woman, now under treatment, tells us that with her certain kinds of food are sure to bring it on. It is positive to come on after pastry, or pork, or bacon, or veal. Even the smell of pork cooking is quite enough. Mutton is almost the only kind of meat that will not bring it on, and even then it must be a very nice little piece. If she cannot get mutton she prefers going without anything. Eggs do not induce it, as a rule, nor does fruit.

Mental emotion and exertion are among the most influential of the occasional exciting causes of the megrim. One of our patients assures us that an attack is infallibly caused by worry or excitement, or emotion of any kind. Even "doing about the house," she says, will bring it on. She has known it come on immediately when she has just been a bit startled by seeing her little girl fall down, although it was really nothing, and was all over in a minute. The excitement of anyone calling on her will often induce an attack, and on this account she never receives a visitor, if she can possibly help it. She likes to be by herself, and "has no mind for company." For years she has been unable to go to any place of amusement. She remembers that even when she was quite a girl any preparation for a day's outing would be sure to bring on an attack, so she never went anywhere, not even out to tea. Going by train or omnibus, or even by the boat, would bring it on. At one time she tried to attend at a hospital as an out-patient, but all the good the doctor did her with his medicine was undone again by the excitement of having to go by the omnibus, so that instead of getting better she got worse. The idea of having to make haste to go anywhere, or having to be anywhere at a certain time would upset her for days.

Many women, as we have seen, always suffer from megrim at the monthly periods. In one instance the patient became irregular, and menstruated at intervals of a fortnight, and then the attacks followed suit. Often there is a suspension of the attacks during pregnancy, but this is not always the case, and some women then suffer from them excessively.

Prolonged abstinence from food will often excite megrim. Many people say they suffer from it directly they feel "leer." The delay of half an hour beyond the accustomed time for taking food is with them quite sufficient. In many the transition from sleeping to waking determines the time of the attack. In the patient to whom we have referred, the attack frequently comes on in the middle of the night, during sleep, and this is very likely to be the case when she has over-exerted herself on the previous day.

Attention has been drawn by several writers to the influence which any circumstance tending to tax or try the eyesight has in determining megrim. The case is recorded of a physician, the victim of this malady, who could at any time immediately induce it by attempting to read on a full stomach. In another instance the paroxysm was always excited by the incidence of strong light, or the attempt to read small print. A

very curious case was that of a person who always suffered from megrim after looking at a striped wall-paper or a striped dress. In many nervous people the sense of smell is so highly developed that it becomes the occasion of migraines. Our patient informs us that her attacks are readily excited by bad smells of all kinds. The smell of a "dirty drain" would be sure to do it. The smell of beer, she says, always brings on the headache, and turns her sick in a moment. If her husband has taken a drop of beer for supper, and she "catches his breath," it is quite enough for her. Often enough she has got up in the middle of the night, and has gone and slept on the sofa in the sitting-room. Sometimes the smell of tea will bring it on, particularly if she is in any way inclined to be ill. A paraffin lamp burning on the table would be sure to upset her. She does not mind nice smells—they do not affect her in any way. She likes flowers, and is not at all afraid of them. She does not like scents, but cannot say positively that they would bring on an attack—she would rather not try. These statements, it should be added, were taken down almost in her own words.

Atmospheric changes, changes of season or weather, are regarded by some as exciting causes of the seizures. Our patient is always very bad when it is frosty, particularly if there should happen to be a cold, cutting wind blowing at the same time. When at home she always goes about with her head done up in flannel. The slightest exposure to the sun would be sure to bring on an attack. She is often afraid to open the door to anyone when the sun is shining, for she knows that directly it falls on her head her sufferings begin. A bright light never affects her in any way—it must be the sun. Heat, she says, is very unpleasant to her, and the heat of the fire would be sure to bring it on. She cannot even do a bit of toast without holding something in front of her to ward off the fire. Cold is with her almost as bad as heat. Any little exposure of the head to cold or draught would be sure to excite it: even going out of the kitchen into the scullery for a minute would do it.

The susceptibility to megrim is aggravated by anything tending to lower the standard of health—for example, exhausting discharges, prolonged indigestion, or disordered bowels. Mental exertion, if too close or continuous, has a similar effect—indeed, the complaint is not unfrequently developed by excessive study, coupled with a deficiency of out-door exercise.

We must now describe more fully the headache which is so

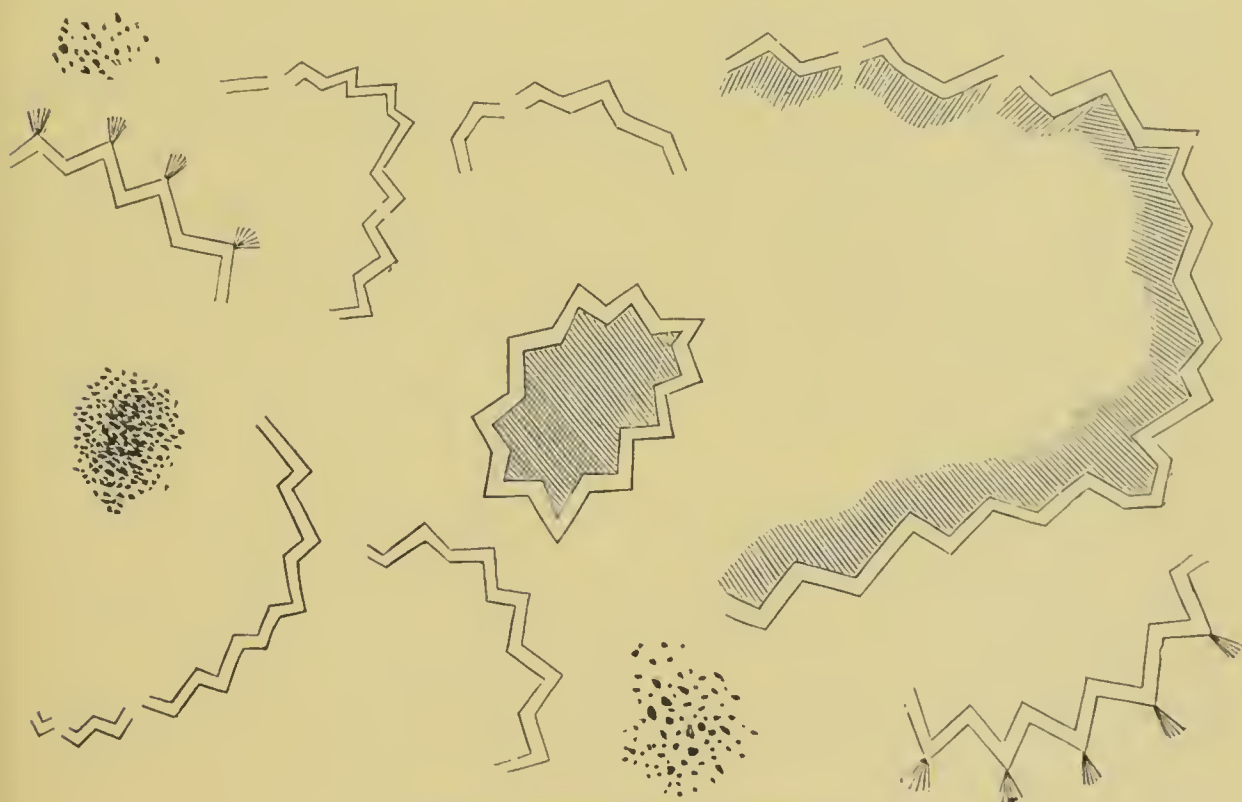
conspicuous a feature of megrim. The pain presents every variety in different individuals, and sometimes in different attacks, but in the majority of cases it is for a time at least very severe. Occasionally it exhibits that intense and agonising character often met with in neuralgia. It is generally moderate when first felt, and gradually rises, sometimes very quickly, to a great pitch of intensity; this is maintained for a certain time, and then it begins to decline again. With some there seems to be something like remissions and exacerbations; the pain does not always maintain the same degree of severity throughout its course; it is often extreme for some minutes, then subsides, to return again with the same intensity. The pain may be stabbing or darting in character, but it is differently described by different people. They are all agreed, however, that when it reaches its full development it is most distressing, and very hard to bear. Most sufferers state that it is terribly aggravated by movement of any kind. When at its height, light and noise are most unbearable, and the patient is compelled to be still and keep the room as dark and quiet as possible. In exceptional cases, however, the pain may be of that intolerable character, that to keep in one position for any length of time is impossible, and the patient has to get up and move about. Sometimes the headache is limited strictly to one side, but more commonly it oversteps the median line. The pain, however, seldom affects the whole head, but one particular part of it, most commonly the forehead, over one or both eyes. Next to the brow the temple is the most common seat of the pain. In some cases it seems to be focussed on one spot, and then it is that it attains its maximum severity. In cases in which the pain has been most agonising, it has often been confined to a little spot over one eyebrow or temple. As a rule the excessive violence of the pain lasts only a few hours; mostly, however, it is not until from eight to twelve hours that the pain becomes bearable. It may be twenty-four hours or even longer before the last of the uneasiness disappears.

A certain amount of nausea is a pretty constant feature of megrim. In some cases it is slight, in others it attains a high degree of intensity and is followed by vomiting. From the onset of the attack there is a total loss of appetite; an aversion to every flavour, even to those which are at other times the most grateful. When actual vomiting occurs it sometimes terminates the seizure.

We have already referred to the fact that an attack of megrim is usually accompanied by some affection of the senses. One of the

commonest of these is disorder of the sight, and often enough it is the first of the symptoms to make its appearance. Not uncommonly there is partial loss of sight. The patient to whom we have so frequently had occasion to refer suffers from this in a marked degree. She describes it as being like a round curtain in front of her, so that she can see round it only at the sides. Many people liken it to the spot you see after having looked at the sun.

In many instances the blindness or partial blindness is accompanied by certain spectral appearances. These are developed in different



SPECTRAL APPEARANCES IN MIGRAINE.

degrees in different individuals; in some they are faint and attract but little attention, in others they are so highly pronounced and sharply defined as to make a most powerful impression on the mind. In their simplest form they consist of a luminous border surrounding the black spot more or less completely, and expanding and widening as it expands. In almost every case this luminous border presents an appearance of rapid motion or oscillation; sometimes it seems to be "glimmering," or "all alive," and some people describe "coruscations," and "showers of sparks." The luminous are depicted around the blank space is coloured with some individuals, but colourless with others. It may be disposed in zig-zags, or may be like a fortification. Our patient tells us that before

an attack comes on she often sees bright crescent moons, sometimes large and apparently close to her, and at others small, as if at a distance. Sometimes she sees specks "like little bits of smut" flying about; when making pie-crust she "keeps picking at it," fancying there are "little black things" on it. Sometimes the specks moving about seem like a cloud of flies.

Numbness and tingling of the hands and upper extremities generally are not unusual phenomena during or immediately after an attack. Sometimes it is described as being like pins and needles, at others the limbs seem to have gone to sleep. Exceptionally, the loss of sensation is accompanied by some impairment of movement, so that the grasp is less firm than it should be, and there is a danger of dropping things. It not unfrequently happens that an attack of the megrim gives rise to a certain amount of mental confusion.

In many cases drowsiness or stupor is an occasional accompaniment. It is of a most uncomfortable and oppressive character, not at all like natural and grateful sleep, but often verging on coma. It is a noteworthy circumstance that this phenomenon is not peculiar to megrim, but is occasionally met with in other nervous diseases. Thus it may attend the progress of asthma, and is of common occurrence after epileptic fits.

The usual termination of an attack of megrim is in sleep—not the lethargic condition which sometimes attends the development of the seizure, but a natural and refreshing sleep. This terminal sleep is probably the natural consequence of the exhaustion of the brain resulting from the unnatural state of activity through which it has passed, being similar to that which follows long sight-seeing or other exhaustive occupation of the senses. Sometimes sleep at any period of the attack will at once cut it short. Thus the case is related of a gardener, who, if seized with megrim when at work, would stretch himself out under a tree, go to sleep for half an hour, and then wake well. Sometimes the attacks end in vomiting, and not in sleep. Many people say that if they are not sick their attacks are prolonged, and hang about for days together. Guided by their experience, they often do their best to assist Nature, and resort to artificial means. More rarely an attack ends in a copious flow of tears, a large secretion of urine, profuse perspiration, or an evacuation of the bowels. Sometimes the pain and other symptoms gradually subside without the occurrence of sleep, vomiting, or any other form of crisis.

In some curious cases the attack of megrim assumes an irregular

form, the headache being but slightly developed, or being entirely obscured by the intensity of the mental phenomena. This affords an explanation of many anomalous seizures, such, for example, as the following, described by an eminent divine and literary character:—"I was this morning engaged," he says, "with a great number of people, who followed each other quickly, and to each of whom I was obliged to give my attention. I was also under the necessity of writing much, but the subjects, which were various and of a trivial and uninteresting nature, had no connection the one with the other. My attention, therefore, was constantly kept on the stretch, and was continually shifting from one subject to another. At last it became necessary that I should write a receipt for some money I had received on account of the poor. I seated myself and wrote the first two words, but in a moment found that I was incapable of proceeding, for I could not recollect the words which belonged to the ideas that were present in my mind. I strained my attention as much as possible, and tried to write one letter slowly after the others, always having an eye to the preceding one, in order to observe whether they had the usual relationship to each other: but I remarked, and said to myself at the time, that the characters I was writing were not those which I wished to write, and yet I could not discover where the fault lay. I therefore desired, and partly by broken words and syllables, and partly by gestures, I made the person who waited for the receipt understand that he should leave me. For about half an hour there reigned a kind of tumultuary disorder in my senses, in which I was incapable of remarking anything very particular, except that one series of ideas forced themselves involuntarily on my mind. The trifling nature of these thoughts I was perfectly aware of, and was also conscious that I made several efforts to get rid of them, and supply their place by better ones, which lay at the bottom of my soul. My soul was as little master of the organs of speech as it had been before of my hand in writing. Thank God, this state did not continue very long, for in about half an hour my head began to grow clearer, the strange and tiresome ideas became less vivid and less turbulent, and I could command my own thoughts with less interruption.

"I now wished to ring for my servant, and desire him to inform my wife to come to me; but I found it still necessary to wait a little longer, to exercise myself in the right pronunciation of the few words I had to say: and the first half-hour's conversation I had with her was, on my part, preserved with a slow and anxious circumspection, until at

last I gradually found myself as clear and serene as in the beginning of the day. All that remained was now a slight headache. I recollected the receipt I had begun to write, and in which I knew I had blundered; and upon examining it, I observed, to my great astonishment, that instead of the words 'Fifty dollars, being one half-year's rate,' which I ought to have written, the words were 'Fifty dollars, through the salvation of Bra—,' with a break after it, for the word 'Bra—' was at the end of the line." This case is so unlike the usual run of cases of megrim that it might readily be mistaken for something more serious.

Let us now briefly discuss the position of megrim in the classification of diseases. To what affections is it most closely allied? Obviously its most intimate relations are with other paroxysmal nervous diseases, such as epilepsy, asthma, angina pectoris, and neuralgia; and these together form a very natural group. They are all affections which are more or less persistent, the principal phenomena by which they are characterised being, however, discontinuous or intermittent, consisting of paroxysms recurring at variable intervals. Moreover, the tendency to these complaints appears in the great majority of cases to be innate and hereditary, being handed down from parents to children, or from grandparents to grandchildren. Not unfrequently the parent suffers from one member of this group, whilst his offspring suffer from others. For example: a predisposition to epilepsy will sometimes appear in some individuals of a family, whilst their nearest relatives are affected by other maladies of the same class. Another remarkable fact is that these different varieties of nervous affection have each their own particular period of life at which they are manifested. We have already seen that angina pectoris rarely occurs in young people, whilst megrim is seldom met with after the age of forty-five or fifty. In all these paroxysmal diseases it should be noticed that during each attack the symptoms gradually increase in severity, reach a culminating point, and then decline. Another feature common to the paroxysms of these several nervous affections is their periodical return; not an exact periodicity, it is true, but a rough approximation to regular recurrence, as if the result of a gradually accumulating tension.

Intimately connected with this periodicity is a kind of compensation, observable in many of these affections. There is obviously some relation between the time of exemption and the violence of the succeeding attack, a longer interval being followed by a more severe seizure, or an unusually severe seizure by a longer exemption. The exciting causes of many of these nervous outbreaks are strikingly similar. We have

already seen that muscular exertion will determine the occurrence of megrim with many patients; and the same is the case with epilepsy, and especially with angina pectoris. Indigestion is a very frequent exciting cause of a fit of asthma—in fact, one of the commonest varieties of asthma is called “peptic” asthma, the attacks being controlled entirely by the state of the digestive organs. We have already referred at some length to the influence of certain kinds of food in inducing sick-headache. The transition from sleeping to waking is singularly influential in determining the occurrence of many of these seizures. Passion and mental emotion are especially efficacious in determining attacks of asthma and angina pectoris, as they are in exciting megrim. The influence of prolonged fasting or exhaustion is also worth bearing in mind. We think the evidence we have adduced will be regarded as affording a conclusive proof that megrim belongs to the same family group of diseases as do asthma, angina pectoris, epilepsy, and neuralgia. If further evidence were wanted, it would be found in the fact that in the same individual one form of seizure is often replaced temporarily, or it may be permanently, by another. For example; epilepsy and asthma are occasionally observed to be interchangeable affections, and in illustration of this the following case is related:—“The patient was a man about fifty years of age, subject to epilepsy. His fits had certain well-known premonitory symptoms, and occurred with tolerable regularity about once a fortnight. On one occasion his medical attendant was sent for in haste, and found him suffering from violent asthma. The account given by his friends was that at the usual time at which he had expected the fit he had experienced the accustomed premonitory symptoms, but instead of these being followed as usual by convulsions, the shortness of breath had come on. Within a few hours this passed off, and left him as well as usual. At the expiration of the accustomed interval after this attack the ordinary premonitory symptoms and the usual epileptic fit occurred. On several occasions this was repeated, the epileptic seizure being, as it were, supplanted by the asthmatic.”

And what, it may be said, is the real cause of megrim? What is it due to? Is it an affection of the liver, or the spleen, or the stomach, or what? This is a question by no means easy to answer although it is a subject that has occupied the best energies of some of the foremost physiologists and pathologists, not only of this, but we may say of almost every age. It would be wearisome even to enumerate the different theories that have been brought forward,

much less to cite the various arguments adduced in their support. Let it suffice to say that nowadays no one believes that sick-head-ache is merely a bilious complaint, or even that it has anything to do with bile, and that the general opinion is that the real seat of the disease is in the brain.

Let us now consider what can be done in the way of treatment. There appears to be a very prevalent opinion that megrim is a complaint in which it is of no use trying to do anything—an opinion with which we venture to disagree, for we must confess that we have an almost unlimited faith in the power of medicines: that is, of medicines properly used.

Of course something can be done in the way of general treatment—hygienic measures, and so on. The patient may have to be instructed what to eat and what to drink, and, still more important, what to avoid. Megrim is of constant occurrence in those who are weakened by a poor and insufficient diet, by too frequent child-bearing, and a prolonged suckling. It often arises from excessive hours of labour, or occupations which entail close confinement in unwholesome and ill-ventilated workshops and dwellings. The treatment of these cases is obvious, however difficult to fulfil. The workman may not be able to induce his employer to get him a light well-ventilated shop to work in, but knowing the value of fresh air, he will pass as much of his leisure time as possible out of doors. Women often ruin their health by suckling their children for twelve, fifteen, or eighteen months. With town-dwellers the baby should be weaned at the latest when nine months old. The poor should remember that if they have large families they must make an extra effort to provide for them. In a somewhat higher grade of society we find the malady brought on, or at all events aggravated, by excessive brain-work, with a deficiency of bodily exercise, short restless nights, and insufficient sleep.

So long as a brain-worker is able to sleep well, to eat well, and to take a fair proportion of out-door exercise, it is not necessary to impose any special limits on the actual number of hours he devotes to his labours. But when what is generally known as worry steps in to complicate matters, when cares connected with family arrangements, or with those numerous personal details which we can seldom escape intervene, or when the daily occupation of life is in itself a fertile source of anxiety, then we find one or other of these three safeguards broken down. Probably the man of business or the successful lawyer fails to shake himself free from his anxieties at night, and slumber becomes

fitful or disturbed. The nervous system, unsettled by the mental strain, brings about various defects in nutrition; the appetite fails; and then we meet with the sleeplessness, the dyspepsia, the irresolution, the irritability, and the depression which are the chief miseries of the overworked. The great thing in these cases is to get a rest at any cost. By rest we do not mean doing nothing, but rather change of scene, of thought, and occupation. If you tell a busy man that he must do nothing, he may endeavour to obey you, but he will soon find out that he cannot, for his brain keeps on working in the same old groove, and he is as much, or even more, worried about his business as if he were still in the thick of it. The great thing is to get a rest by substituting one kind of work for another, to have for a time a nice comfortable sort of occupation to replace the old weary round of troubles. One of the most important remedial agents is out-door life and exercise, which may be taken in any form most congenial to the individual—riding, walking, field sports, or what not. This is at once the most natural, and often the most effectual promoter of sleep we can employ. Active bodily exertion is well known to be incompatible with the maximum of intellectual work, and full advantage should be taken of this fact. The only thing to avoid is excessive fatigue. It is a remarkable fact that a very large number of distinguished literary and scientific men have suffered severely from megrim, and it would seem that some of them have succeeded in ridding themselves of the malady by the adoption of some simple hygienic measure. One, for instance, cured himself by following the prescription of a farrier, who advised him to drink water, eat little, and take exercise. Another was cured by drinking every day a large quantity of fresh water, and exchanging a highly nutritious regimen for a much lighter dietary. A third got rid of his old enemy by the same means, and by taking exercise every day before dinner. There can be no doubt that in many cases great benefit would be derived from a thorough change of locality or climate. Long sea-voyages are not infrequently attended with excellent results, the attacks being absent for months at a time. Unfortunately, these are remedies not within the reach of all.

Now as regards diet. In cases of megrim in any degree dependent on or associated with indigestion, the meals should be moderate and regular, with a simple and nutritious dietary, especial care being taken to avoid all articles of food that are notoriously unwholesome or are known to disagree. The great thing is to live plainly. As a rule, it will be found that beef and mutton digest more readily than veal or

pork. When indigestion is a prominent symptom, it will have to be treated according to the rules already given (*see* INDIGESTION).

Vegetable bitters, such as infusion of quassia or infusion of calumba, enjoy a high reputation for megrim depending on stomach derangement. The gentian and soda mixture (Pr. 14) may be used for a similar purpose. As a rule, it should be taken about half an hour before meals, but when acidity is a prominent symptom it should be taken about the same time after meals. It is in all cases important to regulate the bowels (T. 3), for nothing goes right when they are confined. When the patient is pale and anæmic, and is evidently suffering from poorness of blood, iron is the best remedy, and other measures will in all probability fail until it has been supplied. It may be given in the form of pills or tabloids (Pr. 63 or T. 15), or one of the iron mixtures (Pr. 1 or 2) may be resorted to. Cod-liver oil will do much to improve the general nutrition, but sufferers from megrim often experience great difficulty in taking it. It is well worth trying, however. The Kepler extract may in some cases prove useful.

We now pass on to the consideration of what may be called the specific remedies for megrim. It is difficult to say positively what drug will succeed in any individual case. The patient should never despair of being cured, or at all events very materially benefited, till he has tried them all.

Butyl chloral is a valuable remedy in this complaint. It should be given in five-grain doses, dissolved in water, every three hours for a week or two. This is a moderate dose, and ten grains can be taken at a dose without inconvenience. We usually prescribe it only in the milder forms, and when sickness is not a prominent symptom. It is efficacious in relieving the slight attacks many delicate and nervous women experience after fatigue or excitement.

Probably the most popular remedy for megrim is Antipyrin. It is undoubtedly in many cases useful, but it is not the drug to take indiscriminately and without due consideration. In many people (women especially) it induces a curiously depressing effect, and brings out a rash on the skin. It may be given in the form of the tabloids (T. 5), two every six hours, or as Bishop's granular effervescent antipyrin, the dose of which is a teaspoonful in water.

Somewhat allied to Antipyrin in action is Antifebrin, which is also given in the form of tabloids (T. 4), two every four hours.

Exalgin is an excellent remedy for sick-headache, and in many cases affords prompt relief. The exalgin tabloids contain two grains

in each, and two may be taken every six hours. It is better not to exceed this dose.

Cannabis indica, or Indian hemp, is another valuable remedy. It is found serviceable both in cases with little or no nausea, and in cases accompanied by severe vomiting. It is useful in attacks accompanied by spectra, and is especially effective when, from fatigue, anxiety, or change of life, the attacks are becoming more frequent. A third of a grain of extract of Indian hemp should be taken twice or thrice daily. This dose can be made up into a pill by any chemist. It is a pharmacopœial remedy, and it may be taken for a month or more without any fear of ill effects. Should the dose we have recommended fail to do good, it may be increased to half a grain twice or thrice daily (Pr. 67). The tabloids (T. 46) may be employed with confidence. It is one of the best remedies we have for megrim, and its use should not be discarded without a fair trial.

Of the use of valerianate of zinc we have already spoken when dealing with the subject of headache generally (*see* HEADACHE).

Guarana, or Brazilian cocoa, has been somewhat extensively used during the last five or six years in the treatment of sick-headache. It consists of the powdered seeds of *Paullinia sorbilis*, and is usually given in fifteen-grain doses. One of these powders should be taken every night, and on the occurrence of an attack, every three hours. It is especially recommended when the pain is confined to the right side. It is a little bit uncertain in its action, but it sometimes acts quite like a charm. Guarana belongs to the same botanical family as tea and coffee; and the active principle of the latter—caffeine—has been used successfully in the treatment of sick-headache.

Iodide of potassium is a remedy often employed with success in these cases. It is especially indicated in any case in which there is a syphilitic taint, but even when there is nothing of the kind it often succeeds admirably. One or two tabloids (T. 47) should be taken three times a day for a week or more.

Bromide of sodium is most likely to succeed in women exhibiting a marked hysterical tendency, or in those who have some derangement of the womb. Three tabloids (T. 19) should be taken three times a day for at least a fortnight.

Chloride of ammonium not unfrequently does good. The dose is from thirty to forty grains three or four times a day, and it is best given in milk. The tabloids (T. 31) may be used. The great

point is to take plenty of it, for small doses seldom do any good. Should it not succeed quickly, it will probably not succeed at all.

Common salt has been recommended, but we have had no experience of its use. An author of repute says:—"I will only mention as a contribution from my own experience of such cases that long periods of exemption from returns of their headaches have occurred to patients who have faithfully observed my directions that they should drink a tumbler of common salt and water every morning an hour before breakfast." It is curious that so simple a remedy should not have come into more general use. We suppose the fact is that patients who consult a physician for their ailments expect to have some more potent remedy prescribed for them than common salt. Many people value a drug and estimate the good it does them by its rarity, or the price they pay for it—a very pernicious principle.

Nux Vomica (T. 57) will sometimes be found useful, especially when the stomach symptoms predominate.

Small doses of carbolic acid are sometimes used.

A tincture made from the *Iris versicolor*, or common blue-flag, has proved successful; it is said to be indicated when the headache is preceded by a film before the eyes.

A small piece of *aconitia* or *veratria* ointment rubbed into the forehead quite at the commencement of an attack will sometimes cut it short (*see* NEURALGIA). A popular remedy is blue-pill (T. 16). Franz Josef water often does good.

Next as to the treatment during an attack. As the suffering in *megrin* is greatly aggravated by every form of motion and muscular exertion, and is relieved by recumbency and quiet, the patient from the commencement should retire to a darkened room, as far from noise and disturbance as possible, and, lying down, should endeavour to maintain the position that appears to be most comfortable. If he can succeed in falling off to sleep the attack may be cut short, and in any case the suffering will be less than if he had attempted to keep about. Many doctors recommend that the position should be a slight incline, with the head highest; and this position may undoubtedly be adopted with advantage when there is throbbing or pulsation of the head.

Should there be chilliness, a plentiful supply of blankets and a hot-water bottle to the feet will probably do good.

A diffusible stimulant, such as a glass of brandy-and-water, given quite at the commencement, will sometimes cut short the attack. A

dose of bromide of sodium—three tabloids (T. 19)—will often induce sleep and quickly afford relief, but not infrequently it fails. Sometimes a dose of bicarbonate of potash has a similar effect.

A cup of strong tea or coffee often prevents a threatened megrim seizure, especially if the patient can remain quiet for a time. A gentleman informs us that he obtains greater relief from a bottle of soda-water in which a lemon has been squeezed than from anything. Should it fail, he takes another after a short interval. A dose of guarana may do good, but, as we have said, it is somewhat uncertain in its action. Some people resort to an emetic, and a patient of ours always endeavours to make herself sick by thrusting her fingers down her throat; but it is not the pleasantest of remedies. The inhalation of a little chloroform or ether from a handkerchief or piece of lint may afford temporary relief, but it is not a measure one is justified in resorting to without the presence of another person.

Nitrite of amyl has been employed as an inhalation with success. It is to be used in the manner indicated when speaking of angina pectoris (*see* ANGINA PECTORIS).

When the pain is limited to one side, keeping up pressure on the head with the hand or rubbing the forehead often does good. Many people obtain relief by plunging the head into hot or cold water, or tying a damp towel round the head. Others advise that, in addition, mustard plasters should be applied to the calves of the leg. It must be confessed that often enough these measures do little or no good, and many people will be found to endorse the following opinion:—"During the paroxysm there is scarcely anything to be done: moreover, the patients are so much afraid of all noise, motion, or anything approaching them, that they infinitely prefer to be left perfectly quiet than tormented with useless measures."

NERVOUSNESS.—For information on this subject and on NERVOUS DEBILITY, the articles ANÆMIA, Vol. I., p. 216, and DEBILITY, Vol. II., p. 34, may be consulted.

NEURALGIA.—In neuralgia, of whatever form, the pain is more or less intermittent. The patient never suffers from it continuously with equal severity; there are times when it is either considerably better or altogether absent, and this is an essential feature of the complaint.

Another characteristic is that depressing influences of all kinds

favour the induction of an attack of acute pain, and distinctly aggravate it when already existent.

In the vast majority of cases neuralgia arises by itself, as we say—that is, as the result of constitutional causes; but in exceptional instances it has a mechanical origin, and of this we will adduce an example. A sailor was wounded by a musket-ball in the arm. The wound healed; but the patient remained affected with agonising pain, beginning in the tips of the thumb and fingers, except the little finger, and extending up the fore-arm. His sufferings were so great that he willingly submitted to have the limb amputated; and the operation gave him complete and immediate relief. When the severed limb was dissected, a small portion of lead, which doubtless had been detached from the ball when it struck against the bone, was found embedded in the substance of one of the nerves. Neuralgia may be produced by a shock, such as results from a bad fall or a railway accident, or even by severe mental emotion acting on a delicate organism. Under these circumstances the development of the affection seldom occurs at once, but ensues after a variable interval, during which the patient exhibits symptoms of general depression, with perhaps loss of appetite and strength. When once fully developed, there is nothing to distinguish this from the more ordinary forms which result from purely constitutional disturbance. Sometimes a cut, which perchance has severed a nerve, may be the starting-point of neuralgia. In one case paroxysms of excruciating pain in the little finger followed a gash with a tolerably sharp bread-knife at a point a little above the wrist. These attacks recurred for more than a month, long after the original wound had completely healed. Curiously enough, injury to a nerve may set up neuralgia in quite a different part of the body, and the removal of a small piece of glass from the cicatrix of an old wound has been known to cure neuralgia in a distant situation, for which remedies had long been tried in vain.

Neuralgia sometimes arises as the result of ague, and in this country this variety was formerly far more prevalent than at present. We often meet with it in people who have suffered from ague abroad. The term “brow ague” is to this day applied by many to that variety of neuralgia which is experienced just over one or other eyebrow. The fact of the attacks coming on at regular intervals is one of the great characteristics of neuralgia really resulting from ague.

Neuralgia is seldom met with in young children, but not infrequently it makes its appearance about the age of fourteen. Usually, however, it comes on later, between the ages of twenty-five and forty-five. It is at this time that the individual is subjected to the greatest strain from external circumstances. A man, if poor, is engaged in the absorbing struggle for existence, in the endeavour to maintain his wife and family; or if rich and idle, he is immersed in dissipation or haunted by the mental disgust generated by *ennui*. A woman, if married, is going through the exhausting process of child-bearing, or if single, is probably idle and weary with waiting, fearing lest she should lose her chance of fulfilling those duties which so essentially constitute her mission in life. Sometimes neuralgia makes its first appearance when the race of life is well-nigh run, and indications of physical decay are already making themselves apparent.

Neuralgic pains may occur in any part of the body, but they are met with most frequently about the head and face. One variety of neuralgia of the head is more or less familiar to us all under the name of "tic" or "tic douloureux." Neuralgic pains are usually suspended during sleep. The tic, for example, may keep the sufferer awake for hours and hours, but once asleep, his slumber is likely to remain undisturbed. Sometimes the pain is experienced chiefly in the region of the lower jaw, and then it usually affects the lips, the teeth, the chin, and it may be even one side of the tongue. Curiously enough, the pain is usually strictly limited to one side, often stopping abruptly in the middle line. The paroxysms of suffering in this frightful disease are apt to be induced by the most trivial causes; a sudden jar, a current of cold air blowing on the face, a slight touch, or even the mere mention of the malady, may be sufficient to excite it. The necessary movements of the face in speaking or eating may bring on the pain, and the patient is in constant dread of a visit from his enemy. Often enough neuralgia is associated with toothache, and still more frequently a decayed tooth or long-forgotten stump, although not itself painful, is found on examination to be the exciting cause. Wonderful instances of the cure of long persistent neuralgia are attributable to the dentist's art. In one case—and this is but one of many—attacks of agonising pain coursing along one half of the jaw were at once arrested by stopping a hollow molar on that side.

The pain of some forms of neuralgia is agonising, and it has been supposed by many that it is the most severe the human frame is capable of suffering. Usually it comes on in sudden twinges, which are

very characteristic of the complaint. Some people compare it to an electric shock of great intensity, others to the conflagration of gun-powder, or to the explosive violence of fulminating powder, whilst others declare that it is simply indescribable. A well-known physician, now dead, is reported to have stamped out the bottom of his carriage during a paroxysm; and another member of the medical profession was induced by the excessive agony to make deep cuts into his face and then to apply a red-hot iron to the wound, and the pain not being mitigated, he several times attempted suicide. Even in comparatively mild cases the patient often on the instant of the attack becomes fixed like a statue, fearing to move a muscle or a limb, lest he should aggravate the pain or reproduce the seizure.

One of the commonest forms of neuralgia of the limbs is that which is experienced in the little finger and the contiguous side of the next finger. Often enough it extends downwards from behind the elbow to that spot. The nerve affected in these cases is the "ulnar," a blow on which gives rise to that peculiar sensation experienced on striking what we call the "funny-bone," which is in reality nothing but this nerve. This form of neuralgia is often kept up and revived when apparently dying out by muscular movement. In the case of a lady, a highly accomplished musician, pianoforte-playing had to be abandoned on this account, the slightest exertion with the hands infallibly bringing on an attack of pain.

Neuralgia of the side is by no means an uncommon affection, and it is frequently one involving much suffering. A variety not uncommonly met with is the pain beneath the left breast, which women with neuralgic tendencies so often experience, chiefly as the result of over-suckling, combined, perhaps, with some menstrual irregularity. Neuralgia of the side is not uncommonly associated with shingles, and an attack of shingles often leaves behind it for some time a legacy of neuralgic pains. It is important to distinguish neuralgia of the side from the purely muscular affection to which the term myalgia has been applied (*see* MYALGIA). Neuralgia is non-dependent, or much less dependent than myalgia, on excessive or long-continued muscular exertion. Moreover, there is marked intermittence in the neuralgic affection, the pains not being constant, but only occasional.

A curious fact in connection with neuralgia of the face is that after a severe attack the hair on that side of the head often turns grey, the colour being, after a time, gradually restored to its original tint. This has been observed in many instances.

With regard to the duration of neuralgia we must say a word or two. Some cases run an acute course, lasting only a few days or weeks, the disease terminating after a short series of more or less violent paroxysms. In other cases the disease is chronic, lasting for weeks and months, and even, if the successive and frequent relapses be included, for years. In exceptional instances, neuralgia is persistent throughout life, though with intermissions of longer or shorter duration, and with considerable variations in intensity. On the whole, it may be stated that the majority of cases terminate in complete recovery.

Let us now consider what steps may be taken to ward off neuralgia in those who are constitutionally or hereditarily pre-disposed to it. Much may be done to prevent the development of the affection by timely care and attention.

Good diet is of primary importance. It should be abundant, and should include a fair allowance of meat, bread, eggs, and especially milk, given in conjunction with cod-liver oil, and no apprehension need be entertained of its proving too stimulating.

Regular and systematic exercise is an invaluable adjunct to good feeding, powerfully contributing as it does to the strengthening of the nervous system. Exercise, in whatever form it may be taken, should not be excessive, and should be alternated with a due proportion of rest.

A sufficient amount of sleep, especially during the period of youth and development, is very essential, and for growing boys and girls nine or ten hours is not too much. A good portion of the day should be passed in the open air, and close, badly-ventilated school-rooms are to be sedulously avoided.

The dull, heavy headache from which children often suffer after prolonged study not infrequently ends in neuralgia. In the warmer months of the year it is a capital plan to make children learn their lessons out in the fresh air or in a summer-house. Of course in many cases this is impossible, but with people living in the country and having a garden, however small, it might be done without the slightest trouble; and it is a little point well worth attending to.

No stimulants of any kind should be taken, either in the form of tea, coffee, or spirituous liquors. Milk is a capital drink for young people: and what can be better than a draught of pure spring water—if you can get it?

The cold bath, or sea or river bathing, will do much to ward off

that condition of general debility which is so favourable to the development of all neuralgic affections.

The greatest attention must be paid to the mental and physical development, but there should be no superfluous loading of the mind with useless knowledge. Young people should be led to devote themselves to earnest, systematic, and yet interesting study. No cultivation of vanity or ambition should be permitted; there should be no attendance on frivolous or vicious theatrical performances; but the great aim should be a true devotion to poetry, music, and art. Excessive reading of trashy novels is one of the conditions most favourable to the development of neuralgia. The increasing precocity of boys and girls, in their familiarity with the most objectionable aspects of passion and intrigue, is steadily fed, in the present day, by a system that only too frequently allows unlimited access to literature which is at once devoid of all true literary and artistic merit, and replete with sensational incidents of the most pernicious character. The same degrading tendency is to be noticed in many of the most popular dramatic and public exhibitions of the day, their main characteristic being too often bad art and thinly-veiled sensuality, which is all the more hurtful for being veiled at all. As has been truly said, it would be a hundred times better that a boy, or even a girl, should study the frank out-spoken descriptions to be found in Shakespeare or Fielding, with all their occasional coarseness, than that they should enervate their minds with the sickly trash that is most current and most popular at the present day in the theatre and circulating library.

Those who have already suffered from neuralgia, and are anxious to avoid a relapse, should carefully avoid all influences which are known to be hurtful, such, for instance, as exposure to cold, insufficient or indigestible food, and mental or bodily over-exertion. People engaged in business or professional work should endeavour to get a month or six weeks' holiday every summer, and should utilise it for obtaining a renewed supply of health and energy. Care should be taken to avoid mental excitement, disturbances of the digestive organs, and, speaking generally, all those injurious influences which are recognised as being favourable to the induction of a paroxysm. Avoidance of exposure to cold and wet, and to draughts of air, is especially important.

When neuralgia is fully developed these measures will have to be observed with increased care and attention. The food should be good

and abundant, especially in the case of very young or aged persons. It is advisable to give a larger supply of food than would be necessary for the maintenance of health in people not subject to this affection. Fat is of especial value when taken in conjunction with plenty of meat, milk, eggs, and bread. On this account the continued use of cod-liver oil is strongly recommended; and when it cannot be taken, attempts must be made to supply its place by the free use of Devonshire cream, plain cream, butter, olive oil, or Kepler extract. Unfortunately, neuralgic patients have an almost insurmountable aversion to fat, and the greatest tact and patience will be required to overcome this difficulty. Many doctors find *pulsatilla* useful in removing the objection to fatty food. Wine or beer should be taken, if at all, only at meal-times, and then in the strictest moderation, anything like excess being scrupulously avoided. The advantages of uniformity of temperature are not to be overlooked, and the clothing should be carefully adapted to give protection against sudden cooling of the body or catching cold.

No treatment is likely to prove of much avail in neuralgia unless anæmia, if present, be previously removed. Poorness of the blood appears to be especially favourable to the maintenance of all neuralgic affections. The sulphate of iron pills (Pr. 63) may be given with great advantage. Another good preparation of iron is the tincture of steel, and this may be given in thirty or even forty-drop doses, well diluted with water, three times a day, about an hour after meals. The perchloride of iron mixtures (Prs. 1 and 6) may be employed, if preferred. A good combination is fifteen drops of tincture of steel and six drops of tincture of *nux vomica* or T. 15 and 65 in a wine-glassful of water three times a day. In some cases arsenic (T. 7) does much to improve the quality of the blood, but it is, as a rule, inferior to iron. Further directions for the treatment of anæmia will be found under that heading (*see* ANÆMIA).

One of the best remedies for neuralgia is quinine. In all cases in which there is any suspicion of ague, or when the patient is residing in a district where ague is prevalent, this is the remedy to give. It is indicated, too, when the attacks come on at regular intervals. It has long been recognised that quinine readily controls that form of neuralgia in which the pain is experienced at a spot just above one or other of the eyebrows. Quinine, to do any good in neuralgia, must be taken in fairly large doses—thus, two table-

spoonfuls of the strong quinine mixture (Pr. 10) or two tabloids (T. 64) should be taken every four hours. Some chemists now keep five-grain quinine pills, made up with a drop or two of syrup; and by many these will be preferred to the mixture; one should be taken every four hours. Quinine is said to control neuralgia and ordinary face-ache more effectively when the powder is taken in small quantities every few minutes—as much, for instance, as will adhere to the tip of the finger dipped into the powder. The three great indications for the use of quinine are—(1) suspicion of ague; (2) paroxysms being periodical; (3) pain being experienced chiefly over eyebrow. In very obstinate cases of neuralgia, which have resisted all other treatment, the Germans often give what we should consider enormous doses of quinine—from forty grains to two drachms a day.

Butyl chloral must take a high place as a remedy for neuralgia. It succeeds even when the complaint is due to decayed teeth, and it will often obviate the necessity for an appeal to the dentist. It frequently cures the neuralgia of old people, in whom the complaint is generally most obstinate and severe. It will be found serviceable in neuralgia of the back of the head, and also when it affects the back of the neck, the pain radiating to the shoulders. It must be taken in five-grain doses, dissolved in water, every three hours; and should this dose fail, it must be doubled. It should be given simply in water, and without anything to flavour it.

Phosphorus is another excellent remedy, and some regard it as almost a specific. It appears to be efficacious in neuralgia of any part of the body, and is admirably suited for people advanced in life. It should be given in doses of about one-twentieth of a grain every three or four hours, and it may be conveniently taken in the form of the elixoid—a tea-spoonful in water three times a day, after meals. The pharmacopœial phosphorated oil is a reliable preparation, and may be taken in from five to ten-drop doses in a little milk every three hours. A saturated solution of phosphorus in ether (Pr. 53) is very useful, and in five-drop doses every three hours has been known to work some wonderful cures. It is best taken on sugar or in a little milk. It must never be added to water in a bottle, with the idea of forming a mixture for it would float on top, and the patient might take a week's medicine with the first dose. Phosphorus is a remedy on which we place great reliance in the treatment of neuralgia of all kinds. As might be expected, long-standing cases take the longer to cure; but even in them relief often follows the first few doses.

Exalgin is undoubtedly one of the best remedies for neuralgia. It acts quickly, and is not followed by any disagreeable after-results. The dose is four grains; and this should not be exceeded. It is prepared in the form of two-grain tabloids, two of which should be taken three times a day, each dose being followed by a glass of water.

Many people who habitually suffer from neuralgia regard antipyrin as one of the best remedies. It may be taken either in the form of the tabloids (T. 5) or as Bishop's granular effervescent antipyrin. There can be no doubt that it often succeeds admirably, but it is a very active remedy, and is not a drug to be played with. We believe that much harm is done by the indiscriminate use of antipyrin.

Antifebrin belongs to the same class of remedies. It, too, is put up in the form of tabloids, each containing two grains. The dose for neuralgia is six grains every six hours; but it should be employed with caution.

Chloride of ammonium enjoys a high reputation in the treatment of neuralgia. It sometimes succeeds admirably in neuralgia of the face. It is to be given in thirty-grain doses every four hours, and the tabloids (T. 31) may be taken either alone in water or mixed with milk. Should they fail to afford relief in three or four days, they will probably fail altogether, and may be regarded as unsuited to the case.

Tincture of gelsemium is capital for neuralgic pains running along the lower jaw. It will often succeed admirably when the neuralgia is the result of decayed teeth. From five to six drops should be taken in a wine-glassful of water every three hours. In exceptional cases it produces giddiness, double vision, and unsteadiness of gait; but these symptoms are quite temporary, and will all have disappeared in an hour or two, on discontinuing the medicine. It often happens that, gelsemium cures neuralgia, but leaves the toothache with which it may be associated unaffected. To get any good out of gelsemium you must take it alone in water, and not with other things in a mixture. This is a point often neglected. Pr. 41 may be employed.

Arsenic proves highly beneficial in some cases of neuralgia. It is said to succeed best when the pain is limited to the left side. The pain which it most frequently cures is of a burning or agonising character, and is accompanied by great restlessness. It is generally made worse by the application of cold, is increased by rest, and diminished by exercise. The arsenic may be given in tea-spoonful

doses of the mixture (Pr. 40) or in the form of tabloids (T. 7) one four times a day, or half the quantity may be given twice as frequently. Arsenic succeeds best in those who suffer from an exhausted or debilitated condition, and who have a small pulse, and cold hands and feet.

Tincture of belladonna is not infrequently given in neuralgia. It is indicated when there are acute, throbbing, intermittent pains, with redness of the affected part, and unusual sensitiveness to light, noise, and movement. It should be given in three-drop doses every three hours in a little water, or a smaller dose may be administered more frequently. T. 9 may be used. Belladonna does most good when the patient is full-blooded and of a plethoric habit.

Bromide of sodium seems to be useful in a certain limited number of cases. It is said to succeed best in young men and women of high principle and high mental culture, to whom marriage is delayed by fate till long after the natural period for it. The dose of the bromide has much to do with the success of the treatment. We may commence with three tabloids (T. 19) three times a day, but it will probably be necessary to double the quantity before its full benefits are obtained. Each dose should be followed immediately by a glass of water.

Tonga is a remedy for neuralgia which has long been used by the natives of the Fiji Islands. It consists of parts of at least two plants, the botanical names of which are not yet known. It is made into a fluid extract, and of this the dose is from half a tea-spoonful to a tea-spoonful in a little water three times a day. Relief generally follows the third or fourth dose, without the production of any constitutional disturbance. No ill effects result from the administration of larger doses.

So much, then, for what may be called the specific remedies for neuralgia. But even when we cannot cure the complaint, we can do much to alleviate pain; and we should do well to consider what means are at our disposal for effecting this purpose. First and foremost comes the hypodermic injection of morphia. The great advantage of administering opium by the skin instead of by the mouth is that it does not upset the stomach; and, moreover, a smaller dose will suffice. Indeed, the case is hardly expressed with sufficient force when we say that the hypodermic injection of morphia is usually harmless to the digestive functions, for in a great number of instances it will be found actually to give an important stimulus both to appetite and

digestion, and the patient, who without its aid could hardly be persuaded to take food at all, will not infrequently eat a hearty meal within half-an-hour after the injection. We are thus enabled not only to alleviate pain, but to carry out simultaneously that plan of generous nutrition which is so essential to successful treatment. The dose required is usually one-tenth of a grain of acetate of morphia, to begin with, corresponding to one drop of the pharmacopœial solution. There is not the slightest occasion to inject the drug over the seat of pain, for it will prove equally efficacious if introduced under the skin of the arm or leg. This mode of treatment should be resorted to only under medical advice. It is very important not to repeat the injection with unnecessary frequency; once a day in the milder and twice a day in very severe cases will be all that is advisable, the great thing being to administer it as quickly as possible after the commencement of an exacerbation. If by these means we can prevent the recurrence of severe pain for several days, time is given to the affected nerve to recover itself, and the tendency to neuralgia may be broken through. In some cases a friend or relative might be instructed by the doctor how to give the injection, and in this way a great boon would be conferred on the sufferer. We not unfrequently meet with cases where hypodermic injections of atropia have done more good than anything.

A single dose of chloral—say, one tea-spoonful of the syrup—will often enable the patient to obtain much-needed rest. Chloral, like opium, is not a remedy that can be used indiscriminately and without caution. Nothing can be worse than for the sufferer from neuralgia to acquire a habit of using either of these drugs for the relief of pains. But still, the possibility of a drug being abused does not justify us in altogether rejecting its use. It is very important that the habit of long neuralgic paroxysms should not be set up; and if two or three attacks are promptly stopped by the induction of a sound but not too profound a sleep, time is allowed for so modifying the constitution by tonics and general regimen and diet as to eradicate the neuralgic disposition, or, at least, to reduce it to a minimum. Indian hemp (*Cannabis indica*) may sometimes be used as a substitute for chloral or morphia. Half a grain of the extract of Indian hemp should be taken in the form of a pill (Pr. 67), and repeated in four hours should the desired effect not be produced.

There are many local applications which are used for the relief of the pains of neuralgia. Blisters are often of essential service. A blister to the temple or behind the ear generally relieves neuralgic pains of

the forehead or any part of the face. The obstinate form of facial neuralgia dependent on a diseased tooth often yields to a blister, the neuralgic pains ceasing, although the toothache may continue. Blisters relieve the shifting neuralgic pains common in nervous, sensitive women. The obstinate neuralgia of the side left by shingles, and occurring mostly in old people, generally yields to blisters. There is no occasion to make the blister large; if of the size of half-a-crown, it will be quite enough. Blistering-paper, although mild in its action, requiring some hours' application, generally produces enough irritation to relieve neuralgia of the face; but should the pain continue unabated, it may be necessary to paint on a little blistering fluid with a brush. For application to the side, nothing can be better than a piece of cantharides plaster, as big as half-a-crown. It will probably take from six to eight hours to raise a blister, and it should then be removed. It is better not to cut the bleb, or prick it in any way, for it serves to protect the subjacent raw surface from the action of the air and other irritants. All that is necessary is to cover the side with a thick layer of cotton-wool, to ward off pressure. Other counter-irritants, such as Chatteris oil, mustard, and iodine paint, are used for neuralgia, but they are decidedly inferior to cantharides. Blistering is distinctly a good mode of treatment.

The external application of aconite is often very useful in neuralgia, although in our present state of knowledge it is impossible to say in what cases it will succeed, and in what fail. In neuralgia of the face it often does a great deal of good. In cases in which it effects a cure its action is usually very speedy. A piece of aconitia ointment the size of a bean or nut should be rubbed into the painful spot, and this quantity may be repeated at intervals, until a feeling of tingling is induced, after which it should not be continued. The aconite liniment, or the tincture of aconite, may be applied, by means of a brush, along the course of the painful nerves. A very good plan is to mix the aconite liniment with an equal quantity of chloroform liniment, which assists absorption. Sometimes it will suffice to make the application over the most painful spot. In using a powerful remedy such as aconite, the greatest care must be taken not to rub it into wounds or cracks in the skin, and, above all, to avoid bringing it into contact with the lips or eyes. In some cases veratria ointment mixed with an equal quantity of lard may be used in place of the aconite ointment; but it, too, must be used with a certain amount of discretion.

A liniment made by rubbing together equal parts of chloral and powdered camphor often affords relief in neuralgia, when painted on the painful part. A great advantage is that when successful the relief is almost instantaneous.

A solution of morphia in oleic acid, of the strength of one or two grains to the drachm, often succeeds admirably as an external application. From five to ten drops should be rubbed into the painful spot with the tip of the finger. It should be used once or twice a day. Freezing the part by means of the ether spray often gives great relief in neuralgia, and is by no means a bad mode of treatment.

Electricity is undoubtedly destined to play an important part in the treatment of neuralgia. We can hardly enter into a discussion of the whole subject, but a brief statement of the present position of medical opinion on the subject may be of use to some of our readers. So many people nowadays are acquainted with at least the elements of electrical science, that the sufferer, once knowing the form of electricity he requires, will have but little difficulty in getting the requisite application made. In the first place, then, Faradic electricity is of little or no value in neuralgia; and the same may be said of frictional electricity. The constant current, on the other hand, is a remedy unapproached in power by any other, save only blistering, and the hypodermic injection of morphia; and even the latter is often surpassed by it in permanence of effect, while it is applicable in not a few cases where blistering would be useless. The greatest care is necessary in the choice of an apparatus and the mode of application of the electricity. The battery should be *constant*, and not merely *continuous*. Many of the chains ordinarily sold for this purpose fail to afford relief on this account. A sufficiently constant current may be obtained from either a Daniell's, a Bunsen's, or a Smee's apparatus. Stöhrer's modification of Bunsen's battery is one of the best. It is made so that the elements are not immersed in the exciting fluid until the moment of use, a simple mechanism at once throwing the battery into or out of gear. Few people would care to purchase an expensive apparatus such as an electrical battery, even on the chance of being cured of a persistent neuralgia; but this difficulty may be overcome by borrowing the apparatus, or hiring it from a surgical instrument maker. This may be done at a comparatively small cost, and a very little instruction would soon teach the patient or some friend or relative how to use it. The use of a current intense enough to produce pain, or

even severe discomfort, is never to be thought of in the treatment of neuralgia, and such practice would inevitably do harm. Only such a current is to be used as produces merely a slight tingling, and, on prolonged application, a slight burning sensation, with a little reddening of the skin at one electrode. This is a point of the utmost importance, and anything like a shock is quite out of the question; in fact, it is a different kind of electricity altogether. The application of the current should be made at regular intervals, and at least once a day; in most cases this is enough, but sometimes it is useful to do it twice a day. The matter of regularity is of importance, and it will not do to abandon the treatment immediately on the occurrence of a break in the neuralgic attacks, but it should be continued for some days longer. The length of the application at each sitting should be from five to ten, or at the utmost fifteen minutes. Electrical belts of all kinds should be avoided.

Respecting the surgical treatment of neuralgia we have little or nothing to say. Surgical interference is necessary when, along with decided and intractable neuralgic pain, there is distinct evidence of the presence of some foreign body or of an old scar pressing on the nerve; but these cases are rare and exceptional. In some cases, too, decayed teeth may have to be removed for the cure of neuralgia, but it should be remembered that thousands of teeth have been extracted from the mouths of patients, not only without benefit, but with the effect of distinctly aggravating the complaint.

NIGHT-SWEATING.—Night-sweating is of frequent occurrence as a symptom of consumption. It is not present in every case, but it is in a good many. Curiously enough, the perspiration seems to have a close connection with the sleep of the patient: it seldom comes on while he continues to lie awake; but after sleeping, he wakes, and finds that he is sweating. In a very large number of cases it comes on about three or four in the morning. It varies very much in degree in different cases; sometimes it is merely a little dampness about the head and face, at others it is enough to wet the flannel and night-shirt, and even the sheets. In one case the patient assures us that the bed was wet through right to the mattress. We have heard a man say that he was so wet that it was "just for all the world as if he had been in a bath." We have known instances in which the unfortunate sufferer has been obliged to get up in the middle of the night to change his wet things. The perspiration is generally more profuse about the head and chest

than the rest of the body, but sometimes the patient sweats all over, even down to the tips of his toes. Sometimes the sweating exhibits a good deal of capriciousness—the patient may suffer from it terribly for a week or two, and then it may suddenly take its departure, there being no return for a month or more. The sweating is no evidence of the existence of high fever, for we have often observed it when the temperature has been but little above the normal. It is most exhausting, and it is always desirable to stop it with as little delay as possible. Fortunately, the remedies at our command usually enable us to do so without much trouble.

A very good remedy for night-sweating is oxide of zinc. One or two of the oxide of zinc pills (Pr. 66) should be given every night at bed-time, until the sweating ceases. This is a mode of treatment which has been in use for years at the Brompton and other hospitals for consumption.

Dover's powder is a remarkably good remedy. We usually give ten grains every night at bed-time. Five grains of the powder may be made into a tabloid (T. 39), and two of these may be given at bed-time.

The injection of atropia under the skin usually proves successful. We employ a solution made by dissolving one grain of atropia in two hundred minims of water, and then inject one or two drops of this at bed-time under the skin of the arm. It is a valuable remedy in the hands of anyone who knows how to give a hypodermic injection. Very often a single injection will stop the sweating for three or four nights, or even longer. Occasionally it fails the first night, but subsequently succeeds. The atropia not unfrequently relieves the cough—at all events, temporarily.

Picrotoxine is another good remedy. One of the picrotoxine pills (Pr. 102) should be taken at bed-time, and another may be taken in the early morning if necessary.

A dose of the astringent mixture (Pr. 29) given at bed-time often does good; but we are inclined to think that it is inferior to the remedies already indicated.

A quinine tabloid (T. 64) the last thing before going to bed often succeeds admirably.

The practice of sponging the body with vinegar and water at bed-time to prevent sweating is not a bad one, and often proves successful. It is rather more troublesome than simply taking a pill or dose of medicine, and the exposure may possibly give the patient cold.

In some instances we have given ten drops of tincture of jaborandi in water at bed-time, with manifest advantage.

Many doctors, regarding the sweating as an indication of debility, always order a light supper to be taken just before retiring to rest. A glass of port wine and a biscuit or two usually answer the purpose. This mode of treatment may be used in conjunction with one or other of the specific remedies. Nine times out of ten relief will be obtained from either the oxide of zinc pills or the Dover's powder.

OBESITY.—By obesity we mean excessive fatness, or the accumulation of fat under the skin and around some of the internal organs, to such an extent as to exercise a prejudicial influence on the health or comfort of the individual. The term corpulence is usually restricted to slighter cases, in which the quantity of fat is not so great as to cause positive inconvenience or discomfort.

A moderate amount of fat is one of the signs of health, and conduces greatly to our comfort and well-being. The uses of this substance in the animal economy are many and various, and merit a brief consideration. In the first place, it serves the merely mechanical purpose of a light, soft, and elastic packing material, which being deposited between and around the different organs of the body, affords them support, and protects them from the injurious effects of pressure. Further, being a bad conductor of heat, the fat beneath the skin serves to some extent as a means of retaining the warmth of the body. But the most important use of fat is seen in what occurs during the process of nutrition, for when more fat-forming material is taken into the system than is absolutely required for the maintenance of the body, it is stored up and laid by in the form of fat, to become available for use when the expenditure exceeds the immediate supply. When the direct supply of nourishment is cut off by withholding it, or by interruption of the process of digestion, Nature has recourse to that which has been laid up in reserve in the form of fat. As everyone knows, in the wasting of the body which ensues as the result of starvation, fat is the part first consumed.

Although the uses of fat are so many, and although it is such a valuable constituent of the body, it when in excess becomes not only burdensome and unsightly, but a real and serious evil.

It has been estimated that the mean quantity of fat in the body of a man should be about one-twentieth of his weight, and in a woman

about one-sixteenth; but from what we have said, it is obvious that the proportion must be subject to great fluctuation.

Obesity is not peculiar to any particular period of life. Age, however, does undoubtedly exercise a considerable influence on the production of fat—for example, children are usually relatively fatter than adults: and, again, after the middle period of life fat often accumulates in large quantities. Females are more predisposed to the occurrence of obesity than are men, and women who have never borne children seem to be more frequently affected than those who have had several pregnancies—or rather perhaps, we should say, than those who have had the cares and anxieties of bringing up a large family. It is said that hereditary tendency exercises a marked influence in the production of corpulence, and this statement is in conformity with our every-day experience. Race, again, is an important element in the question: the Americans are remarkable for their thinness, and the Arabs are almost destitute of fat; whilst on the other hand Europeans, and more especially the English and Dutch, are proverbial for the fulness of their figures. In Hottentot women, fat accumulates largely in the neighbourhood of the posterior region, so as to form a considerable prominence: and it is said, we know not with what truth, that if they fall down on the side of a hill they experience considerable difficulty in getting up again. Individual peculiarity or idiosyncrasy comes in as an important factor in the production of obesity. Some people are naturally fat, others lean; some become corpulent on a moderate diet, others remain thin when reared in the midst of plenty and in the lap of luxury. Over-feeding will in the majority of people induce fat, and so will the habit of taking a great deal to drink, though it be only water. Fat people are not always great eaters, but they have invariably a great capacity for imbibing fluids. Farinaceous and vegetable foods are fattening, and sugar in all forms is an especially powerful agent in the production of fat. In sugar-growing countries, the negroes and cattle employed on the plantations grow remarkably stout while the cane is being gathered and the sugar extracted. During this harvest the saccharine juices are freely consumed, but when the season is over the superabundant fat is gradually lost. Ease of mind and repose of body are conditions highly favourable to the formation and accumulation of fat, and so are insufficient exercise and indulgence in much sleep. Anxiety, fretfulness, and that condition to which we refer when we say a person is “fidgety,” have a directly opposite effect.

It has been found that when diet and exercise are opposed to each

other, diet is the stronger. The story is told of a publican living near Newmarket who indulged himself immoderately in eating and drinking. To keep the result of this intemperance in check he took a great deal of exercise, and twice a week he swallowed two ounces of Epsom salts, which always had the effect of making him more hungry. He grew to be prodigiously large and fat, and weighed 392 pounds or 28 stone. His case also serves to illustrate the occasionally beneficial effects of a reverse of fortune, for he failed in his business; and in one year from that time was reduced, under hard work and harder fare, to the weight of fourteen stone, with no suffering whatever to his health.

The consequences and inconveniences of obesity are often more serious than is generally believed. For directing the attention of the public to this subject we are in a great measure indebted to the late Mr. Banting, whose widely read "Letter on Corpulence" is probably familiar to most of our readers. In August, 1862, that gentleman was sixty-six years of age, about five feet five inches in stature, and weighed fourteen stone six pounds (202 pounds). He tells us that none of his family on either side exhibited any tendency to obesity, and that during fifty years' business career he had led a most active life, so that his complaint was not owing to neglect of necessary bodily activity, and did not arise from excessive eating, drinking, or self-indulgence of any kind. He describes most graphically the suffering induced by his "lamentable malady." He says that although of no very great size or weight, he could not stoop to tie his shoe, and could not attend to the little offices humanity requires without considerable pain and difficulty. He was compelled to go down-stairs slowly backwards to save the pain of increasing weight upon the ankle and knee-joints, and had to puff and blow with every slight exertion, particularly that of going up-stairs. He speaks very feelingly of the unkind sneers and remarks of the "cruel and injudicious" in public assemblies, public vehicles, or the ordinary street traffic, and of the annoyance of finding no adequate space in a public assembly, if he should seek amusement or require refreshment.

It may be taken as a general rule that obesity does not conduce to strength or longevity. It is usually followed by diminished vital power and loss of both bodily and mental activity. In many cases there are disturbances of the organs of respiration, circulation, and digestion; the blood suffers in quality; the muscles are weak and have little firmness, and the countenance is bloated and sallow.

There can never be any difficulty in recognising the condition of

which we have been speaking. Sometimes the obesity is partial as in what we call "pot-belly," but in the majority of cases it is general, and affects the whole body.

We must now speak of the treatment of obesity. Mr. Banting's simple narrative of his experience proves that a proper diet is alone sufficient to remove that condition, and that the use of drugs is not necessary. He tells us that for years he struggled in vain against constantly augmenting fatness, and that under the advice of numerous physicians he tried all kinds of different treatments without deriving the slightest benefit.

He says: "I have tried sea-air and bathing in various localities, with much walking exercise; taken gallons of physic and liquor potassæ advisedly and abundantly; riding on horseback; the waters and climate of Leamington many times, as well as those of Cheltenham and Harrogate frequently: have lived upon sixpence a day so to speak, and earned it if bodily labour may be so construed." At one time he took a course of ninety Turkish baths, but never during the whole of the treatment managed to lose more than six pounds in weight. On another occasion he was recommended to take increased bodily exertion before his daily labours began, and with that object he lived near the river, and tried rowing a good heavy boat for a couple of hours every morning. The only result was that he gained in muscular vigour, and with it a prodigious appetite which he was compelled to indulge, and consequently increased considerably in weight instead of getting thinner. At last, his hearing being greatly impaired, he went to a well-known aural surgeon, since dead, who advised him to abstain as much as possible from fat or fat-making articles of diet. Thereupon he almost abandoned the use of bread, butter, sugar, beer, and potatoes, eating freely and fully, however, of other kinds of food. In this way he was reduced many inches in girth, and lost in thirty-eight weeks thirty-five pounds in weight. In addition he improved wonderfully in general health, comfort, and symmetry, and the improvement was permanent.

The following is, with a little modification, the plan of dietary adopted by Mr. Banting.

Breakfast (about 8.30 a.m.).—Four or five ounces of beef, mutton, kidneys, boiled fish, bacon or cold meat (except pork or veal), or a couple of eggs (not hard boiled), a large cup of tea or coffee (without milk or sugar), a little biscuit, or an ounce of dried toast, brown bread, or crust off a common household loaf.

Dinner (about 1 p.m.).—Five or six ounces of any fish (except salmon, herrings, or eels), any meat (except pork or veal), any vegetable (except potatoes, parsnips, beetroot, turnips, or carrots), one ounce of dry toast, or crust from the loaf, fruit out of a pudding (without sugar), any kind of poultry or game, and two glasses of dry sherry, or three of good sound claret (champagne, port, and beer are forbidden).

Tea (about 5 p.m.).—Two or three ounces of fruit, a rusk or two, and a cup of tea (without milk or sugar).

Supper (about 8.30 p.m.).—Three or four ounces of meat or fish, and a glass or two of claret.

On rising in the morning Mr. Banting was in the habit of taking a "special corrective cordial" containing a drachm of aromatic spirits of ammonia, and ten grains of carbonate of magnesia, with the object of obviating any tendency to gout. This plan of treatment is in many cases undoubtedly a good one, but it should not be adopted indiscriminately. Mr. Banting gives a very sensible bit of advice when he says, "I do not recommend every corpulent man to rush headlong into such a change of diet (*certainly not*), but to act advisedly, and after full consultation with a physician." We have heard of cases in which a too close addiction to "Bantingism" has been followed by very unfavourable results.

With obesity, as with most other things, prevention is better than cure. It will be found in the great majority of cases that if a man increases much in weight between the ages of thirty and sixty he is either eating or drinking too much, or is less active in body and mind than he should be. Before resorting to Bantingism he should try if he cannot bring himself down by giving up wine, spirits, and beer, by lessening the amount of food by one-third or even more (without altering its nature), and by taking more exercise. This plan will often lessen fat without reducing the strength or injuring digestion. Should this fail after a fair trial, Mr. Banting's plan, either in its integrity, or in a somewhat modified form, should be cautiously adopted.

Probably the best remedy for obesity is Hashra tea. It is a combination of herbs said to be used by the ladies in the seraglios of the East. From their indolent habits and excessive addiction to sweet-meats many of them become inordinately stout, and have to take some corrective. A tea-spoonful of the herbs made into tea and taken at bedtime for six weeks, usually induces a gradual loss of weight. Many of the stories respecting its effects may be exaggerated, but it is worth a trial. What is aimed at in the majority of cases is to obtain a

laxative effect without purgation. The action on the bowels may easily be controlled by modifying the time of infusion. The longer the herb is left in the water the stronger and more active the draught becomes. Whilst the remedy is being taken bread, potatoes, and sugar should be avoided. There is, however, no objection to the use of toast or rusks, or of almond bread or gluten bread. The recognised substitute for sugar is saccharin, which can be obtained in tabloids containing half a grain in each. One tabloid practically corresponds to one lump of sugar. For sweetening fruit, lemon juice, etc., an excellent sweetening material is made by dissolving by means of heat one drachm of soluble saccharin in a pint of pure glycerine. The solution looks and tastes like the best white honey, and may be employed without the slightest chance of any injurious effect being produced.

At one time it was quite the fashion to take potash and other alkalies to diminish fatness. The result of this method of treatment is that the mucous membrane or lining of the stomach becomes disorganised, the appetite is lessened, and food is not assimilated. There is no doubt that it will indirectly by this means cause considerable wasting of the body, but it is surely very injudicious to damage the health, and perhaps endanger life, with this object. Vinegar is also employed by many people for the same purpose, but it acts in exactly the same way, and its use cannot be too strongly condemned.

It is very essential that everyone who undergoes a course of treatment for obesity should be regularly weighed, and that a careful watch should be kept on the condition of the general health. Particular care should be taken that the appetite does not fail, the power of digestion fall off, constipation ensue, the action of the heart become enfeebled, or the blood get impoverished. As a rule, it is not advisable to diminish the weight at a greater rate than a pound a week, and the treatment should not be carried too far.

OBSTRUCTION OF THE BOWELS.—Obstruction of the bowels is a fearful disease, which may arise from a great number of different causes. It is a very much more serious complaint than mere constipation; on the one hand we have to deal with a condition which usually yields to a little judicious treatment, whilst on the other we have a disorder which too often defies our best efforts.

The causes of obstruction are many, and often it is quite

impossible to distinguish between them during life. The ordinary contents of the bowels, however unwholesome and indigestible they may be, seldom give rise to a permanent stoppage, and even hard, foreign bodies, such as coin, bits of bone, teeth, marbles, plum-stones, and the like, generally traverse the intestines without doing any harm. Pins and needles have been known to prove equally innocuous. Unfortunately, however, foreign bodies occasionally form accumulations sufficiently bulky to obstruct the bowels. The case is recorded of a French soldier who was seized with all the symptoms of obstruction fifteen or twenty days after gluttonously swallowing some pounds of cherries, stones and all. He died, and on opening his body a mass of cherry-stones, almost as big as a man's fist, was found completely blocking up the bowels. Sometimes a large gall-stone may prove fatal in a similar way. Insoluble matters in the form of powders or of fibres when habitually swallowed, even in small quantities, are often concocted into hard masses. Sometimes a collection of purgative pills may give rise to trouble. It is astonishing, however, what a lot of pills some people will swallow without seeming any the worse for it. In a recent breach of promise case it transpired that the defendant, a clergyman, had taken five pills a day for a period of over thirty years—and he survived. Round-worms have been known to cause obstruction; sometimes there are great numbers of them, and they may be twisted up together so as to form a big ball. If in such a case it were possible to ascertain the nature of the obstruction, probably little difficulty would be experienced in effecting a cure.

Sometimes the obstruction is due to stricture of the bowel, and then the hopes of a favourable termination are indeed small. The stricture may possibly depend on some condition of spasm which is merely temporary, but the contraction of the bowel is far more likely to have risen from the healing of some old ulcer, or it may be from the deposit of cancer or some other malignant growth in the wall of the intestine. We have already seen that in typhoid fever we get ulceration of the bowel, but fortunately the healing of these ulcers seldom or never give rise to stricture, probably because they are too small. Children are sometimes born with stricture of the bowel, or even without any passage.

Occasionally the bowel is obstructed by something pressing on it from the outside. In rare cases there has been some tumour connected with the womb or some other organ which has given rise

to the mischief. Sometimes the bowel may become what is called "strangulated," or constricted internally, a knuckle of the bowel being nipped in some little hole in the tissue so that nothing can pass through it. In other cases, what we call "intussusception," or "invagination," takes place, one part of the bowel being drawn into another portion, just as the finger of a glove can be made to glide within itself. The passage of the gut then gets more or less obstructed by the congestion and inflammation which result. Usually the intussusception is single, though three or four, or even ten, distinct invaginations have been found in the same subject. This kind of obstruction is most common in children, and also in old age. Perhaps one of the most frequent causes of obstruction is a rupture, and consequently in every case of obstinate constipation a careful examination would have to be instituted by the doctor of those parts of the abdomen, thigh, and hip through which the intestines could protrude.

Such are the chief causes of this fearful malady, and we should be thankful that the complaint is not more common, for there are few cases of disease more painful to witness than those resulting from invincible obstruction and closure of the intestinal tube.

Next as to the symptoms. Sometimes the attack is quite sudden, and the patient experiences a sensation as if something had gone wrong in his inside. At others the onset is gradual, and there is nothing to indicate anything at all serious. What happens is often of this kind: a person thinks it expedient to take some aperient medicine. This has no effect, and he repeats the dose. It causes pain and griping, and probably sickness as well, but still the bowels are unmoved. Then, perhaps, something stronger is tried, such as jalap, or calomel, or eleterium, or croton-oil, or injections are given, but all in vain. The patient is often conscious that food or medicines reach a certain spot and there stop. Very often they are rejected, or if they are retained they only serve to augment the feeling of anxiety and distress. The abdomen gradually becomes distended, especially if the patient is able to retain food. The intestines act powerfully and do their best to overcome the resistance, but their efforts are in vain, and often give rise to the most agonising pain. Sometimes the great coils of intestines can be made out through the abdominal wall rolling over and over like a lot of snakes. Vomiting soon sets in, and everything may be rejected. After a time the vomited matter becomes "stercoraceous," that is, it has the odour and

appearance of a motion. If relief cannot be afforded, the sufferings of the patient are often very great, and his mental distress is agonising. In fatal cases the mind is usually clear to the last, the sufferer's attention being intently and distressingly riveted upon the possibility of obtaining relief.

When the obstruction is in the upper part of the intestines, and our treatment fails to remove it, death usually ensues in a period varying from five to ten days, but when occlusion occurs lower down life may be prolonged for a much longer period. Cases are on record of patients having lived on without any evacuation of the bowels for four, or five, or even six weeks. It is in these protracted cases that recovery occasionally occurs spontaneously.

What should be the treatment of obstruction of the bowels? In the first place, the attendance of a medical man is absolutely necessary—in fact, we know of no disease in which skilled assistance is of more importance. Whenever there is obstinate constipation which cannot be overcome by ordinary purgatives, you should bear in mind the possibility of there being some obstruction. If you are in any doubt, send for the doctor. In any case in which you are convinced that there is a mechanical obstruction to the use of the bowels, you should at once cease giving purgatives. To persist in the use of powerful purgatives under these circumstances is to inflict wanton and needless suffering on the patient. You must remember that the bowel is already contracting powerfully, and requires no stimulating. Rather should an endeavour be made to moderate the propulsive force, and relax spasm by the administration of opium. A dose of laudanum will often do more to relieve the patient's sufferings and to produce an evacuation than any quantity of calomel or colocynth.

With the view of averting, or at all events postponing, the distension of the bowel above the seat of obstruction, it is necessary to limit the amount of fluid taken by the mouth, and to regulate its kind. The nutriment should be liquid, and small quantities only should be given at a time. Large injections gradually and gently introduced into the bowel, and repeated three or four times a day, often prove of great value. When the obstruction is due to some hard mass, they may in time succeed in breaking it down, or at all events by fomenting the obstructed part, they may facilitate the passage of fluids which have accumulated above. Moreover, if these enemata are composed of beef-tea or milk, and are retained as long as

possible, they serve materially to maintain the strength of the patient. Injections of very large quantities of warm water have sometimes been attended with the happiest results. Fomentation of the abdomen externally by large hot poultices, of gentle friction of the surface with warm oil, may do good. All manipulation must be performed with the greatest care and gentleness, for you might easily rupture the thin, distended bowel by rough or careless handling.

But should these remedies prove unavailing, can nothing more be done? Yes, life may sometimes be reprieved by a surgical operation. Inflation of the obstructed gut by the injection of air into the bowel has been practised with success. In the case of a young lady, about ten years of age, inflation was performed on the fifth day after the setting in of symptoms of acute intestinal obstruction, supposed to depend on intussusception. The proceeding was followed by perfect success, the patient felt "as if a bone had broken" in her abdomen, the obstruction was removed, and motions followed in three hours, although all previous treatment had failed. Other methods of treatment are sometimes resorted to. The gut may be punctured above the seat of obstruction and allowed to discharge its contents through what is known as an "artificial anus." There are at the present time many people living and in good health whose lives have doubtless been prolonged by this operation. Occasionally the abdomen has been opened with the view of disentangling or setting free the intestine strangulated within. It should always be remembered that in cases apparently hopeless a spontaneous cure sometimes takes place almost at the last moment, and that the more protracted the duration of the disease the greater are the chances of recovery.

OFFENSIVE BREATH.—Nothing can be more disagreeable than an offensive breath. In health the breath should be perfectly sweet and tasteless. We have already had occasion to refer incidentally to the condition of the breath in several disorders. Thus we have seen that in diabetes mellitus it has a peculiarly sweet odour, which has been likened by some to the smell of chloroform, and by others to that noticed in an apple-room. In Bright's disease the breath may acquire an odour of sal-volatile, or it may resemble that of the urine, especially when the patient is suffering from the condition known as uræmic poisoning. During the progress of most fevers the breath is not only disagreeable but infectious. In malignant sore throat, in scurvy, and in people who have been salivated by mercury, the breath is often

extremely disagreeable. But probably the disease in which the breath becomes most offensive is gangrene of the lung. This condition sometimes occurs in the course of advanced consumption, and its onset is only too readily recognised by the foul smell of the breath.

In the majority of cases, however, offensive breath occurs not in the course of any of these diseases, but simply as the result of indigestion or want of attention to the teeth. The advertising dentist usually draws a ghastly picture of the horrors of an offensive breath, the moral being, of course, that you are to go to him and have your teeth set to rights. His hint is by no means to be despised, and there is no doubt that one of the commonest causes of offensive breath is the presence of decayed teeth in the jaw. The sooner they are stopped or taken out and replaced by new ones, the better. But even when the teeth are sound they may, from want of attention, taint the breath. It is an excellent plan to clean the teeth with a soft brush after every meal. In the case of men, who during the greater part of the day are out and at work, this may be impossible; but surely in the case of young women, who are at home all day, it is no great hardship. At all events, the teeth should be brushed inside and out at least twice a day, morning and evening. The addition of a few drops of salodent or a tabloid of permanganate of potassium to the water is useful. Camphor may advantageously enter into the composition of any dentifrice that may be employed. When dyspepsia is present it should be removed as soon as possible, not only for the sake of the breath, but for the general health as well.

Most of us are acquainted with the peculiar smell of the breath observed in people who are addicted to the abuse of ardent spirits. It is not actually the odour of the gin, or brandy, or rum, or whatever it may be, that one perceives, but it is something over and above this. It is a sour, acid, "vitrioly" smell, which is very characteristic of the tippler. You may even notice it through the odour of the fresh spirits. Then, again, the breath of the tobacco smoker is often none of the sweetest, and we are all disposed to give a wide berth to anyone who has been indulging in onions or garlic.

The treatment of offensive breath consists essentially in the alleviation of the condition on which it is dependent. In many cases the care and skill of the dentist will do more for you than will medicine. If you have artificial teeth, you should see that no preparation of mercury, such as vermilion, is used in the colouring of the india-rubber framework, now so commonly employed. Several cases of injury from

local mercurial poisoning have been recorded of late years from the red frames used to imitate the gums. When the condition of the breath depends on the stomach the rules laid down for the treatment of dyspepsia should be consulted. A dose of wood-charcoal taken three times a day for a week or ten days often proves beneficial (Pr. 75), or *nux vomica* may be used with advantage (T. 57). The "Soda-Mint" tabloids (T. 72) are convenient for use. When the offensive breath is associated with, if not dependent on, a sore or ulcerated mouth, small doses of mercury according to Pr. 48 will prove the best treatment. In these cases the tabloids of chlorate of potash and borax may be used with advantage. In many cases perfumed carbolic acid used with water as a wash for the mouth proves useful.

PAIN IN THE MUSCLES, OR MYALGIA—This is an affection with which we are all more or less familiar. We commonly speak of it as "cramp," "stiffness," "soreness," or "aching." It is the almost constant result of any unusual or unusually prolonged muscular exertion. Every schoolboy remembers his first ride, and every athlete his first day's training. The traveller remembers how stiff and weary he feels after a long day's journey in a jolting carriage, and the mountain-climber knows how sore he is after ascending any considerable eminence for the first time in the season. It is from pain in the muscles that the seaman is suffering when he complains of how his eyes "burn" after many an hour's weary look-out for land, especially when the duty has to be performed at night.

It might be thought that this affection must of necessity be confined to men, or at all events to them and to those of the fairer sex whose habits and pursuits are more or less Amazonian in their character. Such, however, is by no means the case, and we do not wonder at it, for the fact is that few people have any idea of the amazing amount of work which women of the middle and poorer classes of life have often to get through in the course of the day. From the first thing in the morning to the last thing at night they are always on their legs, washing, dressing, scouring, making the beds, shaking the carpets, sweeping, ironing, sewing, darning, clearing up, dusting, looking after babies, etc. etc. All these acts require muscular exertion, and this is sometimes excessive in degree, yet from their very insignificance, and their daily occurrence, they are too often completely ignored. It is common enough to hear a man say that "the missis is a rare good 'un, she's always at

it," but he would, in all probability, be considerably surprised to hear that she, in her quiet way, does almost as much physical work in the course of the day as he does. When we see a woman sewing it very seldom occurs to us that the muscular exertion requisite for the performance of the act may, if carried too far, give rise to considerable pain and suffering, yet, for all that, the hard-worked sempstress knows well enough what it is to stitch, stitch, stitch, till her "eyes ache" with watching the needle, and the muscles which move the eyeball are thoroughly weary. Again, pregnant women often complain of the pain in the back resulting from the effort to keep about all day with the weight of an extra burden to support. Many ladies are familiar with the severe pain known as a "cutting-out pain," the result of the unusual strain thrown upon the muscles of the back in leaning over a table to cut out patterns. The amount of work which ladies, in even the upper classes of society, will get through in the course of the day and night is really something wonderful, and it is no wonder that they occasionally suffer from pain and stiffness in their limbs. Not very long ago a well-known physician was called up at three o'clock in the morning to go and see a young lady who was suffering from excruciating pains in her thighs and the calves of her legs. It was found on inquiry that she had been to a ball, and had danced with great spirit for six consecutive hours, the only rest which she had allowed herself being at supper. Such cases are not so uncommon as might be supposed, although the suffering is seldom sufficient to induce the patient to send for her doctor.

Sometimes this pain in the muscles is produced by acts at first sight so trivial in their nature, and in the amount of exertion which they require, that the relation of cause and effect is very apt to be overlooked. We often enough talk of "laughing till our sides *ache*," and many people habitually suffer from soreness, pain, and tenderness in the muscles of the chest and abdomen after a night spent with an irresistibly comic actor, but the true cause is often ignored, and the sufferer not unfrequently sends for the doctor under the impression that he has caught a bad cold, or that he is going to have an attack of pleurisy.

We have said that pain in the muscles is commonly the result of over-exertion. A person who is debilitated as the result of a long illness, or whose health is for any reason below par is very apt to suffer in this way, although the absolute amount of work done may be very small. A twenty-mile walk may not be over-exertion for a man in good physical condition, and he may feel none the worse for it, but, on the

other hand, a weakly woman may suffer intense pain in the muscles from sitting up in bed for half an hour or so to take her meals.

In some cases attacks of muscular pain have undoubtedly arisen from excessive practice at the pianoforte. The performer commonly sits upright on a stool without the least artificial support, with the exception of the corset in women, of course; both hands are in perpetual motion; the body is moved from side to side according to exigencies of time and tune; the legs are used to work the pedals, and as singing is often combined with the instrumental music, the muscles by which the chest is moved are forcibly employed.

Custom and training will enable a person to undergo without fatigue an amount of work which he would otherwise find it impossible to accomplish. The well-trying pedestrian can laugh at the stiffness which the sedentary student experiences when he suddenly throws off his quiet habit for more active physical work. The mason and the blacksmith toil with ease for a period quite impossible to the uninitiated; but, set the mason on horseback, and the blacksmith to do duty as a hod-carrier, and they will both complain of stiffness, or muscular pain, on the next day.

As long as the relation between the work to be done and the power to do it remains the same the exertion of the muscles may not be excessive, but whenever muscles weakened or reduced in power are obliged to do the same work as when they were strong, the exertion they put forth is excessive for them, the severity of the exertion being in proportion to their weakness.

It is astonishing how quickly, and by what apparently trivial circumstances, a man of even herculean powers may be "pulled down." A strong cigar or a pipe will in a few minutes reduce a person who is unaccustomed to the use of the "weed" to a condition of complete prostration. Fright will in an instant deprive a person of all power of motion, his tongue will cleave to the roof of the mouth, and he may be unable to articulate a word or even utter a sound. Most people know how quickly a sharp attack of diarrhoea "takes it out of one." A blue-pill and a black draught may in a few hours reduce the lion-hearted Richard to the level of the very lowest of the Saracen soldiery.

When one is out of health everything seems a trouble, and every little exertion gives rise to pain in the muscles. When we are well we can support the head, and keep ourselves erect all day long without fatigue; but directly we are debilitated in any way we feel

the exertion, and are glad to seek the friendly support of the sofa or arm-chair. We all know how heavy the eyelids seem when we are tired, and how difficult it then is from fatigue of the muscles to keep them open. Difficulties seem to increase as we become less able to cope with them. There is an old Spanish proverb which says that, "if you carry a lamb all day, it will become a sheep at night." It costs us no suffering while we are well to perform the ordinary work of the day; but when illness has reduced our powers, when a refractory stomach has refused the necessary supplies of food, or when we have been brought low by accidents, loss of blood, diarrhoea, hunger, or other cause, we find the exertion excessive, and we suffer from pain in the muscles. As long as the school-girl is healthy and strong she can sit erect for hours, and at the end of the day feel weary only; but as the influence of sedentary life, mental exertion, deficient appetite and digestion, a crowded sleeping apartment and schoolroom begin to be felt, the weariness becomes painfulness, and she is no longer fatigued, but is suffering.

There is scarcely any part of the body which may not be the seat of muscular pains, for they are to be met with wherever there are muscles or sinews. Some parts are, however, more frequently attacked than others—the trunk more commonly than the extremities, the abdominal walls oftener than those of the chest, and the legs more constantly than the arms. The pain may be felt between the shoulders, at the back of the neck, over the blade-bone, in the back, and in many other regions. Women very frequently suffer from a muscular pain under the left breast. It is sometimes situated on the right side, and is occasionally met with on both. The sufferings it involves are often very severe, and it is not unfrequently supposed by the patient to be a symptom of some very serious disease. Pregnant women often suffer from a muscular pain, referred to a small spot about the size of a shilling just below the breast, commonly the right. The pain is pretty constant, slightly relieved by the recumbent posture, but increased by lying on the affected side; it may come on during the third month and last to the time of confinement, and from its wearing character is very apt to cause great depression. Another common seat of muscular pain is in the lower part of the body in front, and it is then sometimes erroneously supposed to arise from some disease of the bladder or womb.

Pain in the back is a very common form of muscular pain. It is readily produced by a long ride on horseback, by a long stand

in a crowd, by digging or weeding in a garden, or by working in a position that requires much stooping. It is sometimes brought on by railway travelling, or by having to carry a heavy infant or other considerable weight for many consecutive hours. It is an accompaniment of many diseases, especially of those which are not sufficiently severe to make the patient lie up altogether, but are yet bad enough to considerably diminish the strength. It is often a cause of infinite trouble to those whose occupations necessitate the carrying on the head of heavy weights, such as water, stones, baskets of fish, fruit, flowers, etc., and is especially common in young men of all classes of society, whose health has been lowered by an excessive discharge or other similar cause.

Muscular pains under the collar-bones and over the front of the chest often follow prolonged efforts at vomiting or fits of coughing. In women they are not uncommonly produced by sewing, especially when the individual is unaccustomed to the work, or when the material consists of some thick, heavy substance, such as coarse calico, linen, or canvas. They are often associated with extreme tenderness of the breast, and sometimes even with slight swelling.

There is one form of muscular pain which, from the frequency of its occurrence and the ease with which, on a superficial examination, it might be mistaken for pleurisy, almost deserves a special notice. It is commonly known as pleurodynia, and is an affection of the muscles of the side of the chest. Many of us are acquainted with it under the name of "stitch in the side," and are aware that it may be produced even in perfectly healthy people, by running, or immoderate laughing, coughing, or sneezing. It is very common in delicate women, and even in men whose health has been reduced by an attack of illness or other similar cause. The pain is often confined to the left side. It is always increased by taking a deep breath, or by any movement which stretches the muscles. Before the introduction of the clinical thermometer it was frequently by no means an easy matter to distinguish between pleurisy and pleurodynia or false pleurisy. Nowadays, in the majority of cases little or no difficulty is experienced in making the diagnosis. Pleurisy is attended with fever, whilst pleurodynia is a non-febrile disease. If we take the temperature and find that it is not at all elevated, we may feel assured that it is not pleurisy from which the patient is suffering: but if, on the other hand, the temperature is distinctly raised, we are certain that we have to do with something more than mere muscular pain. Of course, the patient may be suffering

from a cold, and this may be sufficient to cause the elevation of temperature, but the exercise of a little judgment usually suffices to eliminate this or any similar source of error.

Muscular pains are not unfrequently mistaken for symptoms of some disease of serious import, but there is no real difficulty in recognising the true nature of the case. The pain is usually spoken of as wearing, aching, burning, or "hot," but is occasionally referred to as a "weakness," or "soreness." In those who have much bodily fatigue for six days in the week, and a perfect rest on Sunday, the pains are always better if not absent on Monday morning, and very bad on Friday and Saturday. As a general rule, muscular pains are absent in the morning, begin about noon, and increase in severity up to bed-time. They commonly cease entirely when the sufferer lies down in bed, but in bad cases they are only renewed by the recumbent posture. The pains are often attended with exquisite tenderness of the skin, so that even the contact of the clothes may be almost unbearable. They are usually traceable to over-work of some kind or other, although the circumstances which suffice to produce them are often apparently very trivial in their nature.

Having recognised the nature of the complaint, we must proceed to treat it. It is obvious that a disease which has been produced by over-exertion will be most benefited by rest—rest of the whole body, and more especially of the affected part. It is easy enough to recommend rest, but we are perfectly aware that in many cases it will be found difficult to carry out our directions. A woman very frequently cannot take sufficient rest, for the household duties fall upon her, and, as she says, "If I don't look after things, everything goes wrong." You tell a man to rest, and he says—"Rest! I only wish I could. I haven't had a holiday for years. If I don't work, who's to keep the wolf from the door?" There are a good many people who cannot rest, but there are a good many people who will not rest. Many women, for instance, are naturally too anxious, active, we might even say too fidgety, to take anything like a real rest. Men, commonly enough, recognise the fact that exhaustion, consequent upon continuous tension, invariably ends sooner or later in restlessness and irritability, but they too often neglect the great vital law of change, which runs through the whole universe, and impels the weary to cease from labour. Strangely enough the well-to-do are often the greatest offenders in this respect. It is the old story of much would have more, and thus we find the man who has a lucrative business, and who is making money fast, is the one most difficult

to induce to take the urgently-needed rest. His excuses are innumerable. In vain it is pointed out to him that for his own sake, and for the sake of his family, rest is absolutely necessary. Ambition or the love of wealth leads him on, and he continues the battle until at length a crisis arrives, and then that cessation from work which might have been enjoyed at a convenient season and for a suitable period, is enforced, most probably at a very inconvenient time, upon a bed of pain and amidst sorrowing faces. Rest, to be of much service, must be thorough rest—rest, mental and physical. It is of but little advantage for a worn-down mother to go to the sea-side for the benefit of her health if she has to take all her little ones with her; or for an author to resort to the Lake district with his pens, ink, and paper in undiminished array. Equally useless is it for the jaded belle to change the ball-rooms, theatres, concerts, and operas of the town for the assemblies, dinner-parties, and picnics of the country. Rest is often useless because it is insufficient. Rest in an arm-chair, or on the sofa, may do good, but it is usually inferior to rest in or on the bed. For a delicate woman to get much benefit from rest, or to obtain relief from muscular pains, she should retire to her bedroom at two o'clock every day, and lie on her back for a good hour or more with no other companion than a readable book. If there is much constitutional debility another rest may be required about seven in the evening.

Where rest of the whole body is unattainable, it may perhaps be possible to rest the affected part. Any plan of treatment by which we rest, and at the same time support, the painful muscles will prove advantageous. We all know what relief a well-made corset or waist-belt will sometimes afford, when the pain or weakness affects the chest or abdomen, or the muscles of the back.

The fact that "stays" afford a considerable amount of artificial support to the body is easily shown by the consideration of a few simple facts. A woman can, as a rule, sit upright considerably longer than a man, she retaining her graceful position long after he has taken to lolling back in his arm-chair, or to exhibiting the soles of his boots on the sofa. Then again it is well known that ladies who have once accustomed themselves to the use of stays have the greatest difficulty in dispensing with their support, and that spasm or cramp is not unfrequently experienced in some of the erect-keeping muscles when they are laid aside. A person, therefore, without any artificial support is more obnoxious to muscular pain in the trunk than one who does not attempt to keep the body upright without assistance. Whilst recommending the use of

stays for the relief of muscular pains about the body it must be distinctly understood that we are not advocating or defending the practice of tight lacing.

In addition to the use of stays, or in cases in which they fail to give the requisite relief, a good stout plaster applied well over the seat of pain and its immediate neighbourhood may prove more successful. It is necessary that the plaster, to do any good, should be large, and that it should be evenly applied. In some cases where a single plaster has proved useless, two or three applied one on the top of another have effected a speedy cure.

The importance of affording artificial assistance to parts that are subjected to any considerable strain is very generally recognised. We often seen navvies who have to wheel heavy barrow-loads of earth, place a tight strap round the wrist, and there can be no doubt that they derive considerable help from this simple expedient. In like manner washerwomen, who have to do much wringing of clothes, apply a piece of ribbon to the same place and for the same purpose. Labourers who have much standing-work employ a belt, and the pedestrian not unfrequently ties a handkerchief tightly round his waist to prevent "stitch in the side." Swimmers sometimes use a tight garter round the calf with the view of warding off cramp.

For effecting a permanent cure, in addition to the local measures, steps must be taken to improve the general health. The benefit which may be derived from a judicious change of air and scene cannot be over-estimated. It is a commonly-received opinion, and in the main a correct one, that the change, to be of service, must be from the bad air of town to the purer air of the country or the sea-side, but such is not always the case, for experience shows that a change from the country to a comparatively unhealthy town may do good. It is probable that in this case the benefit is derived rather from the absence of excessive mental or bodily labour, and in the presence of pleasant associations and companions, than from the mere change of air. Although we have strongly advocated the employment of rest in the treatment of muscular pains, we do not mean to imply that no exercise at all should be taken. On the contrary, we believe that moderate exercise in the open air will, in the majority of cases, be productive of much benefit by improving the appetite and promoting the circulation. When walking is too much for the strength, gentle carriage exercise might prove of benefit. Respecting the diet, all we need say is that the patient should live generously, and that stimulants may be used in moderation.

When recovery is retarded by anæmia, indigestion, or constipation, the appropriate remedies should be applied, and these evils remedied with as little delay as possible.

In weakly people purgatives are to be employed with considerable caution. People suffering from muscular pains are not unfrequently supposed to have congestion of the liver, and are consequently purged unmercifully, the only result being that the general tone of the whole system is lowered, and the pains are consequently increased. There is a case recorded of a man who, under the impression that his muscular pains were the premonitory symptoms of apoplexy, took purgatives to such an extent that he stated he had gone to the closet six times before breakfast, and twenty times during the day, and that the average of his visits was about fifteen times a day for at least three months. His method of treatment had materially increased the severity of the pains, and had reduced him to such a state of weakness that he had often had to rest on the bed while dressing, and had been unable to get up-stairs without assistance after his day's work was over. He rapidly recovered his normal condition of health on discontinuing the use of his purgatives. In the majority of cases of muscular weakness in which the bowels are confined a little brimstone and treacle, or the more elegant confection of sulphur or confection of sulphur and senna (Pr. 59) will effect all that is necessary.

For those who do not like purgatives the following device may be adopted. A strip of coarse linen, about a foot broad, and long enough to go three times round the body, is wetted at one end sufficiently to admit of the damped part going round the body, the dry part of the bandage covering that which is wet and excluding the air; an attendant stands still, holding the dry end, whilst the patient applies the wet cloth and rolls himself up tightly and ties the strings to keep all snug. The bandage must be put on under the ribs so that the play of the lungs be not affected. It is worn night and day, and only removed to be re-damped, in the morning on getting up, at mid-day, in the evening, and perhaps again at night. This is an excellent plan, and nearly always keeps the bowels perfectly regular.

What should be our immediate treatment when a person is suffering from acute muscular pain? The patient should go to bed, and the affected part should be kept at rest by the application of a plaster or good strong bandage. Twenty drops of laudanum, or

ten grains of chloral in a little water, will usually produce sleep, and ease the pain. Chatteris oil or a mixture of oil and laudanum well rubbed into the part often proves more successful than any other mode of treatment. The frequent application of hot poultices may do good, but they are as a rule, inferior to the methods we have already mentioned. In chronic cases, freezing the part by means of the ether spray may be tried; sometimes the pain is removed by a single application. The use of iodine ointment is indicated in obstinate cases where there is tenderness of the muscles, but the skin can be pinched without causing any unusual pain. It should be remembered that this is a mild application, and that it should therefore be rubbed into the part two or three times a day. Chloride of ammonium (T. 31) in twenty-grain doses, dissolved in water and mixed with an equal quantity of milk, often does good.

The stiffness and aching of the muscles which commonly follow an unusually long walk may in the majority of cases be prevented by at once wrapping one's self in a dripping wet sheet, and then getting a thoroughly good rub down. When the stiffness has already set in it may be removed by taking a drop of tincture of arnica in a little water every ten minutes for the first hour, and subsequently hourly.

Sufferers from myalgia often derive great benefit from a temporary residence in a hydropathic establishment. This mode of treatment is especially to be recommended in the case of the man of pleasure accustomed to lead an irregular, luxurious, or indolent life. The system is full of enjoyment, and the simple diet of the water-cure patient is relished with a gusto unknown to the pampered slave of calipash and calipee—to those comfortable *gourmets* who begin dinner with soup, fish, and *pâté*, washed down with two or three glasses of sherry. The post-prandial lightness of spirits more than compensates for any amount of abstinence.

In pleurodynia the importance of rest of the affected part is as great as in any other form of muscular pain. There are, however, certain accessory modes of treatment, which, in addition to those which we have mentioned when speaking of muscular pain generally, may be employed with advantage. Thus, in obstinate cases, a mixture of chloral and camphor may be used as a local application. When equal parts of these two substances are pounded up in a mortar they form a syrupy liquid which, when painted on the painful part, or gently rubbed in, often affords speedy relief. A blister

applied over the seat of the pain often does good, although from its weakening effect on the patient it may increase the pain for a day or two. It is just possible that the blister makes the part so painful that the patient carefully abstains from using his muscles, and thus, by giving them a rest, derives benefit. Belladonna liniment often affords marked relief in pleurodynia. It should be rubbed over the tender and painful part several times a day, according to the severity of the pain. Sometimes a belladonna plaster, from the support which it affords, succeeds where the liniment has failed. When pleurodynia is associated with some derangement of the womb, *actæa racemosa* is the appropriate remedy. Ten drops of the tincture of *actæa racemosa* should be given three times a day in a little water. It is especially indicated in pain under the left breast occurring in women. Small doses taken frequently of a tincture prepared from the common buttercup (*Ranunculus bulbosus*) have been known to succeed in cases of pleurodynia where other remedies have been tried in vain.

PALPITATION.—As a rule, we are not sensible of the beating of our hearts, but when the pulsations become inordinately forcible they make themselves felt, and the sensation is in many cases a most troublesome and distressing one.

Palpitation implies increased force, or increased frequency, or an increase both in force and in frequency, of the contractions of the heart.

The pulsations are sometimes tumultuous also, and irregular as well as unduly forcible and frequent, but this is not necessarily the case. The irregularity in the heart's action may be experienced not only by the patient himself, but may be obvious to others. Sometimes a few rapid and feeble pulsations occur at uncertain intervals, and are followed by others that are fuller and slower. Sometimes one or more beats are left out, the next beat, as if to make up for the pause, being unusually strong. The intermissions may be unperceived by the patient himself; but often they are attended with a singularly disagreeable fluttering or trembling sensation in the breast.

There may be a variety of attendant symptoms occurring singly or in groups, the most prominent being a sensation of choking, a feeling as if the heart were jumping into the throat, and the eyes bursting from the sockets, pain over the region of the heart, faintness with actual loss of sensibility or partial unconsciousness. The pain rarely amounts to more than a sense of dull aching soreness, but in

exceptional cases sharp twinges occurring in paroxysms may be experienced. Shortness of breath rarely occurs to any notable extent, but it does sometimes, giving the patient the appearance of a person out of breath with running, singing in the ears, giddiness, and confused vision, headache, a hot head and flushed face with clammy coldness of the hands and feet, may be added to the list of disturbances. In rare cases the eyeballs seem to enlarge and protrude to an unnatural extent from the orbits, and this may be accompanied by enlargement of the throat.

In some instances palpitation is more or less permanent, but in the majority of the cases it comes on in paroxysms lasting for an hour or two, or perhaps only for a few minutes, and then passing off again. In young persons of a delicate constitution it often occurs, in a slight degree, nightly; so that the patient on going to bed passes many hours sleeplessly, not only feeling his heart beat, but hearing it. His subsequent sleep is unrefreshing, and he awakes in the morning more tired and jaded than when he went to bed. A fit of palpitation often terminates in sleep, and in the case of hysterical women a copious discharge of watery urine may occur at the time of release. The time during which a patient remains subject to these attacks varies infinitely, as does the duration of the intervals of freedom. In some cases, as, for instance, in young women suffering from "whites," the palpitation is constant, the pulse beating for many days at 150 or 180 strokes in the minute. In very severe cases the pulse has a mere vibratory motion, and cannot be counted, whilst its rhythm is extremely irregular.

The subjects of palpitation are usually of the nervous type—persons in whom the nervous element predominates, and who are what is called emotional or susceptible. Thus the nervous constitution of the female sex renders women more liable to it than men. Further, temporary causes affecting the emotional nature increase this susceptibility: as, for example, sudden surprise, excitement, anxiety, or mental shock. Certain periods, as the commencement of the menstrual flow, and a short time before it, render females periodically liable to it. It often comes on after excessive indulgence in tea or tobacco. It is common in the subjects of Bright's disease, and in those debilitated by any chronic illness. Youth, too, is more subject to palpitation than adult life. It rarely occurs in those under fourteen, except as the result of some sudden start or shock; but it is frequently met with in middle-aged adults—in women chiefly, but also in nervous men. The more the nervous system in men approaches the feminine type, the more likely are they to suffer

from palpitation. There is, however, a great diversity in this respect—some women seem as little likely to suffer from palpitation as the majority of men do to become pregnant.

Palpitation of the heart often depends on a disordered condition of the stomach; in fact, it is more frequently due to that cause than to any other. Palpitation may occur as a symptom of stomach derangement even when indigestion causes no other inconvenience. We have already related a case in which persistent palpitation resulted from excessive indulgence in tea (*see* DISEASES OF THE HEART). The active principle of tea—theine—is a powerful neurotic agent, and when indulged in to excess has a very decided action upon the heart, rendering it irritable, excited, and irregular in its action. In such cases either tea must be discontinued entirely or its mode of preparation must be modified. Mr. Ernest Hart, the Chairman of the National Health Society, points out that the most essential point in making good tea is that the leaf should be thoroughly crushed and subdivided and then infused for the shortest possible time. The traditional preference by the Japanese, an intelligent and refined race, for prepared and carefully selected “tea powder” is well known. It is not easy to obtain good tea powder in Europe, but the ordinary domestic tea-leaf can readily be crushed or powdered before use. Regarded chemically, the composition of coffee or cocoa is closely allied to that of tea, and it is not easy to believe that the symptoms produced by excessive indulgence in tea are relieved by substituting for it those of allied vegetable products: but so it is. It is said that tea contains, in addition to its principle, theine, a volatile intoxicating oil, and it may be the presence of this agent which makes the difference. We conclude that palpitation is due merely to stomach disorder when it occurs occasionally only, when the action of the heart is perfectly regular in the intervals, and when there are no other symptoms of heart disease.

In the following table the more prominent characters in the palpitation depending on organic disease of the heart are contrasted with those of palpitation arising from other causes:—

Palpitation depending on Disease of the Heart.

1. More common in men than in women.
2. Usually comes on slowly and gradually.
3. Constant, though more marked at one time than another.

Palpitation arising from other causes.

1. More common in women than in men.
2. Usually sets in suddenly.
3. Not constant, having perfect intermissions.

Palpitation depending on Disease of the Heart (continued).

4. Often not much complained of by the patient; occasionally attended by severe pain extending to the shoulders.
5. Beat against the chest usually stronger than natural; sometimes remarkably increased, heaving and prolonged; at others irregular and unequal.
6. Lips and cheeks often blue; countenance congested; dropsy of the lower extremities common.
7. Palpitation increased by stimulants and tonics, but relieved by rest.

Palpitation arising from other causes (continued).

4. Usually much complained of by the patient; readily induced by mental emotion; and frequently accompanied by pain in the left side.
5. Beat neither heaving nor prolonged; often abrupt, or knocking, and accompanied by fluttering sensation at the pit of the stomach.
6. Lips and cheeks never livid; countenance often pale; dropsy absent, except in extreme cases.
7. Palpitation increased by sedentary occupations, relieved by moderate exercise, and by stimulants and tonics.

As a rule, patients with heart disease complain but little of palpitation, whilst those with digestive derangements often regard it as the essence of their malady. That palpitation is in the majority of cases merely functional is evident from the number of young persons who suffer from it, and who afterwards attain a hale old age. In young people especially, every passion and every affection acts on the heart and changes its healthy beat, and over-exertion, or any little error in diet, may produce the same result. In some instances palpitation arises from prolonged mental application and over-work, as in the case of literary men, barristers, and others whose pursuits are psychical rather than physical. Occasionally palpitation is met with as a symptom of retrocedent gout—the pain in the joints suddenly subsides, and then the sufferer complains of his heart.

And now as to the future of these cases. Do people get cured of palpitation, or do they die of it? Nine times out of ten they recover completely. It is very essential to bear in mind that palpitation is not only not invariably associated with grave disease, but that it is often a mere nervous abnormality, of little or no importance. This is also true of intermittency of the heart's action. A recent writer says: "On mere intermittency of the heart alone, no practitioner is justified in giving an opinion as to the existence of heart disease. The suffering and misery entailed by hasty medical opinions as to the existence of heart disease of a grave character, and its proneness to sudden death, is something fearful to contemplate. I know well a hale north-country yeoman of unusually fine physique, whose peace of mind, years ago, was ruined by a rash medical opinion, formed most

unjustifiably; and so strong was the impression then made, that no amount of assurance of his health can free him from the terrible bondage of this idea." Palpitation of violent character, such as obtrudes itself forcibly on the patient's attention, is more decidedly the characteristic of some nervous affection than of organic disease of the heart. In heart disease, palpitation is often to be regarded almost as a good sign, affording evidence as it does that the heart has still strength to palpitate. Before doing anything in the way of treatment, it is very important to make sure of the diagnosis. If after reading our description you have any doubt whether your palpitation is due to heart disease or not, you had better go to a doctor, and get him to decide for you. It is of no use trying to treat yourself if you are not sure what you are suffering from. If you at any time in your life have had rheumatic fever, and suffer from palpitation, we should advise you to get your chest examined.

The treatment of nervous palpitation is not a very difficult matter. When an attack comes on the patient should be made to lie flat on his back, the neck and chest being bared, and a liberal allowance of fresh air insisted on.

Half a tea-spoonful of sal-volatile may be given in a wine-glassful of water, and a bottle of eau-de-Cologne may be held to the nose to smell.

It is important to avoid all appearance of alarm, and to avoid exuberant sympathy.

When the palpitation has been induced by a sudden effort, rest, quiet, and the administration of a little stimulant, with the addition of ten drops of either tincture of belladonna or digitalis, will be found useful.

Cold brandy-and-water can always be obtained in an emergency, and is an excellent remedy for occasional use.

When the attack is over, treatment must be directed to the improvement of the general health.

When the palpitation is due to a finely-strung and over-susceptible nervous temperament, we cannot hope that medicine will prove of much avail, but quiet, mental and bodily, and avoidance of all exciting pursuits, are indicated, whilst any temporary derangement of the bowels and stomach should be seen to without delay. When the occupations are chiefly sedentary, outdoor exercise, with plenty of fresh air, should be tried. Cold or tepid baths are of essential service. As has been very truly said, "the excitement of modern fiction is not without an effect on the

emotional nature of its votaries, who become as abandoned to this form of intemperance as others are to the use or abuse of other stimulants." The enthralling plot which the victim to novel-reading demands is allied to the cry for brandy of the toper; slighter stimulants are inefficient and powerless. The desirability of removal from the circulating library is obvious, and exercise, other interests and occupations, and rational mental pabulum are necessary.

When there is more than ordinary disturbance of the nervous system, the administration of bromide of sodium (T. 19) may prove useful.

Disturbed rest is better met by early rising, active exercise, and light suppers than by opiates or other narcotics, or even by morning slumber.

When the liver is sluggish, nothing acts better than a blue-pill (T. 16) and black draught.

When there is obvious derangement of digestion, the gentian and soda mixture (Pr. 14) taken half an hour before meals answers admirably.

Attention must of course be paid to diet, mutton and beef being taken in preference to pork and veal. In some cases nothing agrees so well as boiled mutton. Pastry is seldom admissible, and the same may be said of cheese, nuts, and many other articles of diet that are ordinarily reputed to be indigestible.

For flatulence, nothing succeeds better than three drops of oil of cajeput taken on a piece of sugar when the wind is troublesome.

Of the specific remedies for palpitation, digitalis is one of the best. Two table-spoonfuls of one of the perchloride of iron mixtures (Pr. 1 or 2) may be taken three times a day for a week, with the addition of ten drops of tincture of digitalis to each dose. The infusion of digitalis often proves more effective than the tincture. A drachm may be taken twice a day in the iron mixture, or, better still, alone.

Tincture of aconite often proves useful; it should be given in from one- to three-drop doses (T. 1) in water three times a day. It will succeed admirably if added to the iron (Pr. 1 or 2) or gentian mixture (Pr. 14). Five-drop doses of tincture of belladonna (T. 9) in water three times a day sometimes succeed admirably.

The belladonna plaster applied over the region of the heart is a capital remedy. It should not be smaller than six inches by four. We have ordered it in hundreds of cases with the greatest success. To make a plaster adhere firmly, first wash the part with soap and warm water, then dry it thoroughly with a soft towel. After waiting an hour,

warm the plaster before the fire, and apply it smoothly. A plaster with creases in it is most uncomfortable, and is worse than useless. If properly put on, a good plaster will last a month or more. It matters not whether the palpitation be due to heart disease or the functional derangement of the stomach; it will do good. It should be kept on till it comes off by itself, or until it gets wrinkled and uncomfortable, when it may be taken off. Its only possible disadvantage is that it sometimes produces a little eruption of pimples, or a rash not unlike that of scarlet fever. In that case the plaster will have to be taken off. Should the plaster cause this irritation of the skin, it may be punched with holes at regular intervals, so as to admit of the escape of the retained perspiration. These porous plasters are often very useful. We can recommend the belladonna plaster in the treatment of palpitation. Its application does not, of course, in any way limit the choice of internal remedies. Mustard poultices applied over the region of the heart often help to regulate its action; they lessen the feeling of distress, and cannot possibly do any harm, even if they do no good.

When there is any suspicion of gout, colchicum must be given.

Tincture of musk and caffeine are remedies that occasionally prove useful in palpitation.

As accessory measures, abstinence from tea and tobacco is essential.

The effect of tobacco is to render the heart's action quicker, its beat feebler, and to promote a liability to palpitation. There is a distinct functional derangement of the heart which is recognised and known as "smoker's heart." In many instances this condition arises from great indulgence in strong tobacco, and frequently the substitution of a lighter form of tobacco in moderation is sufficient to afford relief without the abandonment of the favourite habit. We recently met with a man whose palpitation had for years resisted treatment, simply because he consumed three or four cigars regularly every day of his life.

Many of the London poor—the women especially—live almost exclusively on weak tea and bread-and-butter. It is hardly to be wondered at that they suffer from palpitation, and form so large a contingent of our hospital out-patients. The great thing is to get them to substitute milk or cocoa for tea.

Soberness in the use of alcoholic stimulants is important. It is really wonderful what a quantity of drink many people consume in the course of the day. Not so very long ago a patient told us that his usual allowance was four or five pots of beer, with a "go or two" of rum or rum-and milk in the morning, to "pull himself together." He

added that of course that did not include a glass or two if he met a friend, "which didn't count." He expressed considerable surprise on being advised to reduce the quantity, and said that he always considered himself "a very sober man." He added, by way of explanation, that he was a barman, and was "always in it"; and that, as it didn't cost him anything, he didn't see how it could do him any harm. This is by no means an exceptional case; and when a man assures you that he is not taking too much, it is desirable to obtain from him some idea of what he considers to be "too much."

The free use of wine and spirits in the intervals of the attacks of palpitation not only renders the patient more subject to them, but deprives him of one of his chief aids during their occurrence. There is no occasion to abstain altogether from the use of alcohol—a pint of beer a day, or three glasses of sherry or port, can do no one any harm. Experience alone will teach the sufferer what kind of alcohol may be taken with least discomfort.

People subject to palpitation should not hurry themselves. Take a rest going up-stairs, for example; never get excited, and rather lose a train than hurry to catch it.

PARALYSIS.—By paralysis, or palsy, is meant impairment or loss of power or sensation in some part of the body. Sometimes only one side is affected, and then it is technically called *hemiplegia*; at others the loss of power is confined to the legs, and then we say it is a case of *paraplegia*. Then, again, the paralysis may be local, only a small portion of the body, as a limb, a foot, or the face, being involved. In many instances the affection is due to brain disease, and immediately follows a shock. Not infrequently the brain is unaffected, the disease being in the spinal cord—or spinal marrow, as it is called. Sometimes even it is the nerve itself which is at fault.

That variety of paralysis which we have called *hemiplegia* is the most common form of palsy. It usually comes on suddenly, and is spoken of as a paralytic stroke. Almost invariably both arm and leg are paralysed, and the left side suffers more frequently than the right. The loss of power is very striking. The patient may *will* the motion of his leg or his arm, but neither of them any longer obeys the act of volition; if they are lifted by a bystander, and then let go, they drop down like logs of wood. This is a condition very painful to witness, for the powerful man, full of health and strength, is in a moment

reduced to the condition of helplessness of a little child. One side is for the time being dead. When only one limb suffers, it is usually the arm. Often enough this condition is accompanied by some loss of power over the movements of the face. Sometimes the mental faculties remain intact, but very often the memory becomes weakened, and there is a peculiar tendency to shed tears and to become distressed by slight causes. In paralysis of the right side there often co-exists that peculiar loss of the faculty of language which we have described under the title of *APHASIA*. In hemiplegia from disease of the brain, although the sufferer cannot, by his own will, move the palsied limb, yet the irritation of the sole of the foot will often excite active movements, the involuntary action causing no little astonishment to the patient. Supposing recovery to take place, the symptoms of amendment are usually first noticed in the leg. Besides the palsy, there is mostly loss of sensation also, but this is by no means so constant a symptom as the paralysis. When the sensibility is lost or blunted, it is so commonly in the same parts that are affected with paralysis. But sometimes there is loss of sensation and no palsy, and, more strange still, there has been sometimes loss of feeling on one side and loss of the power of motion on the other. It must be remembered that these palsied parts do not resist the influence of cold and heat so well as the sound parts. They readily get chilled if exposed to even a very moderate degree of cold. One has always to be careful in applying hot water bottles or hot bricks to the feet of the paralysed, for the parts may get blistered or scalded without the patient experiencing any pain. In this affection the attendance of a doctor is necessary. As a rule, good feeding, with the administration of tonics, is to be enjoined.

Paraplegia, or paralysis of the lower half of the body, usually arises from some disease of the spinal cord. It most frequently commences slowly and insidiously, with weakness and numbness of the feet and legs, or with tingling and a creeping sensation in the parts, unattended with pain. By degrees the weakness increases until there is complete loss of sensibility and motion of the lower extremities, with perhaps some affection of the bladder or bowels. Although the power of moving is completely lost in the lower limbs, the patient is not uncommonly rendered sleepless at night by painful spasmodic twinges and startings in the parts. Paraplegia may be the result of some injury to the spinal cord, or it may proceed from the pressure of a tumour or other causes. Sometimes it follows the immersion of the lower part of the body for some time in cold water. In one case the patient had been in the

habit of wading for hours together in a river while fly-fishing. Much good may often be done by medicinal treatment in these cases. The remedy to give is extract of physostigma. It is made into little pills, each containing a thirty-second of a grain, and one of these is taken every three hours during the day-time, and also at night, if awake. In three or four cases we have seen considerable benefit derived from the adoption of this mode of treatment. The sooner the physostigma is taken, the greater is the likelihood of its doing good. In old-standing cases the treatment may have to be persisted in for some weeks, or even months. These patients require the greatest care and attention, and it is extremely difficult to keep them clean and dry. The great thing is to avoid bed-sores. The parts on which the pressure is greatest should be examined almost daily, to make sure that there are no signs of redness. The skin may be hardened by the occasional application of a little alcohol in the form of brandy or eau-de-Cologne, rubbed in with the palm of the hand. A mixture of oxide of zinc and starch, in equal parts, forms an excellent dusting powder. One of the best preventives of bed-sores is glycerine or glycerine cream. The parts exposed to pressure should be washed morning and evening with tepid water, dabbed quite dry with a soft towel, and then gently rubbed over with a little of the glycerine or glycerine cream. A draw-sheet, made of linen, and sufficiently large to be firmly tucked in at both sides of the bed, will prevent the bedclothes from getting soiled. When people have of necessity to pass the whole of their time in the horizontal posture, it is a capital plan to have two beds placed side by side, and to move them occasionally from one to the other. The question of getting a water-bed is in many cases well worth considering.

Locomotor ataxy is a disease closely allied to, though not identical with, paraplegia. There is loss of control over the movements of the legs, but there is no actual paralysis. When the patient attempts to walk, instead of the leg dragging after him as it does in true paralysis, it is suddenly jerked out in a most peculiar manner, just as if it were trying to dance a "break-down" by itself. The patient can move the limb, but not in the way he wishes. The power of guiding the muscles aright is quite gone. It is not a common disease, but we recently had a case of this description under our care, and succeeded in doing him some good. He was a tall, thin, wiry-looking man, the foreman in a large warehouse in the City. He had always been accustomed to lead an active life, and could, as he said, "walk, run, or jump with anybody." He lived five miles from his work, and "did the journey, twice a day,

in and out, under the hour." After a time he noticed a feeling of uncertainty in his walk, and "a little giving way in his knees"; in fact, to use his own expression, he was "like a horse that had been hamstrung." Soon he felt that he could not run so well, and he gave up his morning and evening walk, taking the omnibus to and from his work. In a little while he felt afraid to jump on the omnibus whilst it was in motion, and took to hailing it, so that it might stop for him. As time went on he felt afraid to get on the roof or knifeboard, and went inside. He next noticed that he staggered a little in his walk, and suddenly received notice of dismissal from his employers without any reason being assigned. He was at the time quite unable to account for this, but on consideration, has no doubt he lost his place in consequence of his staggering having been attributed to the effects of drink. For two years he endeavoured to obtain employment, but unsuccessfully, and being in trouble and distress, paid very little attention to the condition of his health or the progress of his complaint. At the expiration of that time his powers of walking were found to be greatly affected. On attempting to take a step, the leg was thrown up in the air, and then brought down violently, the heels first coming in contact with the ground. He could walk for a short distance, but was obliged to take every opportunity of steadying himself by the table and other articles of furniture about the room. His greatest difficulty in locomotion was in crossing the road, and going round corners. Stepping on the curbstone was always a difficult and delicate operation. He would often walk in the road until he came to a lamp-post by which he could assist himself on to the pavement. He was quite unable to stand alone in the dark, and merely turning out the gas would cause him to fall almost as if he were shot. There was no true paralysis, for when the patient was in bed he could move his legs in any direction. He suffered greatly from pains in his limbs, which he described as being "sharp, rheumatic, spasmodic, like toothache." He derived considerable benefit from taking physostigma. He had some pills given him, each containing a thirty-second of a grain of extract of physostigma, and of these he took one, six or eight times a day, for three or four months. At the end of that time he could walk very much better, and could cross the street, and step from the road on to the pavement with comparative ease. At times he could walk almost as well as ever, and there was distinct improvement in other respects. The physostigma did him a great deal of good, in spite of the fact that from domestic and

other reasons he was very unfavourably situated for carrying out systematically any plan of treatment.

Facial paralysis is a variety of palsy in which only the muscles of the face are affected. It most commonly arises from cold, as when a person is exposed to a draught in driving or in a railway carriage, but it sometimes arises from rheumatism, and other causes. The appearance presented by a patient affected with facial palsy is peculiar and very striking. He cannot knit the forehead, neither can he raise the eyebrows or draw them together. The eye remains open, as the power of closing the lids is lost, and their blinking movement no longer exists. From one half of the countenance all power of expression is gone; the features are blank, still, and unmeaning; the eyelids apart and motionless. The other half retains its natural cast, except that in some cases the angle of the mouth on that side seems a little awry. The patient cannot laugh, or weep, or frown, or express any feeling or emotion with one side of his face, while the features of the other may be in full play. Further, the patient cannot whistle, for he is unable to purse up his mouth for that purpose, and for the same reason he can neither spit nor distend his cheeks with air, or blow wind from the mouth. In mastication portions of food are apt to collect between the cheeks and gums, as the support of the lips and cheek necessary for its proper performance is lost. The saliva and fluids frequently trickle from the mouth. At the same time it must be remembered that this particular form of palsy is much less serious than the other forms we have been considering, for if unaccompanied by palsy of the limbs there is really no cause for anxiety. It is often supposed that the patient has had a stroke, and is in imminent danger; but such is not the case. Sometimes the loss of power over the movements of the face is accompanied by loss of sensation in the corresponding part. Usually, sight is unimpaired and the tongue is unaffected, but the articulation of some words formed by the lips may be difficult. Facial palsy may have a duration of from ten days to as many weeks; perhaps three or four weeks may be regarded as the ordinary duration. Cases arising from cold or rheumatism nearly always do well.

Now as to the treatment. Hot fomentations are useful at an early period of the complaint. Later warm douches, shampooing, and galvanism may be resorted to. -

When there is any suspicion of a syphilitic taint, iodide of potassium may be used with advantage. It should be given in the form of the

elixoid of iodide of potassium—a tea-spoonful in a wine-glassful of water three times a day after meals.

Should a rheumatic or gouty habit be found in connection with the palsy, colchicum (Pr. 33), or perhaps lemon-juice might exert a beneficial influence.

Iron (Pr. 1, or T. 15) is likely to be useful when an anæmic condition of the system exists. For *Hysterical Paralysis*, see HYSTERIA.

PERITONITIS.—By peritonitis is meant inflammation of the membrane lining the abdomen. It may occur in either sex and at all periods of life. It may come on from cold or even without any apparent cause, and it may frequently occur in women who have been recently confined, constituting a very serious complication. The prominent symptoms are high fever and intense pain in the stomach, aggravated by the slightest movement, or even by coughing or sighing or taking a deep breath.

These are not cases in which home treatment will avail you much. You must send for the doctor. In the meantime let the patient get to bed, give her aconite (T. 1), apply linseed-meal poultices or hot fomentations to the abdomen, and let her have ice to suck.

PILES, OR HÆMORRHOIDS.—The terminal portion of the bowel—the rectum—is subject to derangements as numerous and varied as any organ of the body, although for obvious reasons we ordinarily hear very little about them. These complaints not only cause intense suffering, but give rise to an amount of depression and anxiety quite out of proportion to their gravity. They usually spring from habits prejudicial to health, being either engendered by sedentary pursuits or the result of over-indulgence in the luxuries of civilised life.

Piles, or hæmorrhoids, occur both in men and women, and are usually not met with until middle age. Amongst circumstances favouring their formation may be mentioned pregnancy, habitual constipation, the frequent use of powerful purgatives, straining at stool, rich living, insufficient exercise, hereditary tendency, and a long residence in tropical climates. They are much more prevalent in the upper classes of society than amongst the labouring population. The latter live plainly, take plenty of exercise in the open air, and seldom suffer from constipation.

We shall discuss this complaint chiefly from a medical point of view. Of surgical operations, the use of the knife, the ligature, and acid, we

shall speak later. They are in many cases of inestimable value, but it is undesirable to submit to any operative procedure until it has been clearly demonstrated that medicinal treatment has failed.

There are many valuable remedies for piles, some of which ought, in every instance, to afford relief.

For bleeding piles nothing is equal to hazeline. It is almost a specific, and many doctors who have used it extensively say they have never known it fail. It is to be used in those cases, and in those cases only, in which the piles bleed. Its use is especially indicated when in addition to bleeding piles there are enlarged or varicose veins of the legs. A table-spoonful is to be put in an eight-ounce bottle of water, and of this three tea-spoonfuls are to be taken every three hours. It is not to be given with any flavouring agent, or with any other medicine. In addition to taking the hazeline it is necessary to apply it locally. A hazeline lotion is made by adding two table-spoonfuls to an equal quantity of water, and when the piles are external this is to be applied to the part by means of two or three folds of linen covered with oiled silk, and renewed several times daily. When the piles are internal some of the lotion is to be injected with a syringe or injection apparatus into the back passage two or three times a day. We can almost guarantee that in the cases we have indicated hazeline will effect a cure. Every chemist keeps hazeline cream, which for external piles is more convenient to use than the lotion. It should be applied to the parts after the morning bath, and again after each motion. If you have bleeding piles you may get rid of them almost to a certainty by using hazeline as we have directed. We recently cured with this drug a gentleman who had suffered from hemorrhoids for over thirty years. He had been an officer in the army, and his complaint was attributable to excessive riding. He was for ten years in India and China, and since his return had lost blood almost daily. He had been operated on twice without any permanent benefit, and had quite given up all hope of obtaining relief. He used the hazeline every morning after his bath, and also after every motion, and in less than a week the bleeding had ceased.

Hydrastis canadensis is another remedy which enjoys a high reputation in the treatment of piles. Internal piles, which cause great prostration of strength, and are accompanied by various dyspeptic symptoms giving rise to considerable pain during defecation, and frequent attacks of bleeding with a little discharge of mucus or matter, are cured, or at all events materially relieved, by the use of *hydrastis*. A lotion is made

by adding a tea-spoonful of the tincture of the hydrastis valoid fluid extract to half a pint of water, and a table-spoonful of this is injected into the back passage night and morning. In addition five drops of the extract are to be taken in a wine-glassful of water three times a day. In the case of external piles hydrastis is often of great value, the lotion being used three or four times a day, just in the same way as the hazeline lotion; or the drug may be applied in the form of a cerate or ointment.

A tincture made from horse-chestnut (*Æsculus hippocastanum*) is used for some kinds of piles. When the piles are due to congestion of the liver it will usually be found to be inferior to nux vomica or sulphur, of which we shall speak presently. When the piles are associated with enlarged veins in the legs, and bleed much, hamamelis is a better remedy. But when the only associated symptom or appreciable cause is a confined condition of the bowels, æsculus is the drug to be employed. The dose is five drops of the horse-chestnut valoid extract in a little water every three hours, and a lotion or injection may be made by adding two table-spoonfuls to half a pint of water.

Nux vomica is useful for piles which do not bleed, especially when the patient also suffers from dyspepsia, congestion of the liver, and confined bowels. From five to ten drops of the tincture of nux vomica (T. 57) may be taken in a tumblerful of cold water twice a day, half an hour before breakfast and dinner. It usually acts as a laxative, and will often overcome the most obstinate constipation.

In ordinary simple cases of piles it is a good plan to keep the bowels moderately relaxed by occasionally taking a tea-spoonful of hashra tea or of some electuary, such as confection of sulphur or confection of senna. We have already given a formula for a confection containing both sulphur and senna (Pr. 59), and this usually answers admirably. The old-fashioned sulphur and treacle is as good as anything. These laxatives should not be employed when any of the specific remedies for piles, such as hamamelis, hydrastis, or horse-chestnut, are being administered. As a local application the ointment of galls and opium is extremely useful, and often affords great comfort to the sufferer.

When piles become inflamed, the best remedy is tincture of aconite, a drop in a tea-spoonful of water every ten minutes for the first hour, and subsequently hourly until the pain subsides. For the excessive pain often associated with piles an aconite lotion may be employed in addition to its internal administration. The lotion is

made by adding two tea-spoonfuls of the tincture of aconite to half a pint of water.

Sufferers from piles would do well to use what is called medicated paper or curl paper. It can be procured in packets from any chemist.

When the piles are very painful it may be necessary to use a piece of sponge dipped in cold water. It is said, but with what truth we know not, that the printer's ink in newspapers is injurious, and by the irritation it causes favours the development of piles.

Many people who think they have piles are in reality suffering from fissure. A fissure is a small chap, crack, or ulcer situated just within the anus, or orifice of the bowel. It occurs most commonly in women, and especially in those of a weakly constitution. The sufferer complains of pain, usually of a severe burning character, on the passage of a motion, especially if a hard one; occasionally it occurs at the time of defecation, but more frequently it commences a few minutes afterwards, and it may continue for two, four, or even eight hours. This pain is very severe, and is peculiarly wearing and burning. It may extend all round the hips and even down the thighs. Sometimes it gives rise to irritability of the bladder, or even to symptoms similar to those resulting from derangement of the womb. Often enough there is a good deal of constitutional irritation, the nervous system generally being deranged in, as we say, sympathy with the local irritation. The pain produced by an evacuation is sometimes so severe that the patient avoids defecation as long as possible, and even abstains from food with the view of lessening the necessity for the frequency of the act. If you have reason to suppose that you are suffering from fissure and not piles, we advise you to consult your doctor at once. We give this advice, not because the complaint is a dangerous one, but because it is so situated that it would be well-nigh impossible for you to make an application at all satisfactorily without some assistance. It is of little or no use applying to a non-medical friend to help you, for the fissure is so small that it would probably escape the notice of one untrained in the investigation of such matters. On consulting your doctor you will, of course, say at once that you have reason to suspect that you have fissure of the anus. There is often a great deal of mock modesty about these matters, and the doctor often obtains the required information only after a considerable amount of beating about the bush. You will find that it will simplify matters if you say at once what it is you think you are suffering from.

Fistula of the anus is another complaint we have known mistaken for piles. It usually forms as the result of an abscess, running up by the side of the gut. Sometimes it follows kicks, blows, or bruises on the lower part of the body. Here, again, little or nothing can be done without the assistance of a medical man. The mere fact of its position renders it almost impossible to treat it without extraneous help.

Before leaving the subject of piles, we will say a word or two about diet and other accessory measures.

When the complaint occurs in debilitated persons, benefit will be derived from a tonic (T. 79) and nutritious plan of treatment.

In the great majority of instances, however, more particularly when occurring about the middle period of life, piles are connected with a plethoric state of the system, and then we recommend abstinence from coffee, peppers, spices, and all stimulating and highly-seasoned food. In these cases, too, beer, wine, and spirits must be taken in the very strictest moderation. The best drink—at all events for the summer months—is a light claret. A liberal supply of well-cooked vegetables, and plenty of ripe, wholesome fruit, is enjoined.

Sedentary habits, and the habitual use of soft cushions and feather beds, undoubtedly favour the formation of piles, and do much to retard the progress of a cure.

The pain attending piles which do not bleed may often be relieved by washing the parts with cold or tepid water.

In an attack of bleeding piles, it is a good plan, in addition to bathing the part, to drink a tumblerful of cold water, and then to lie down for an hour or two. The horizontal posture is conducive to recovery.

In many cases of piles, great relief follows an occasional injection of about a pint of water into the lower bowel. It acts beneficially by constricting the blood-vessels, and it also gives tone to the relaxed tissues, and softens the motions before evacuation.

When piles are very painful, the unfortunate sufferer may obtain relief by sitting over the steam of hot water. When the attack is a very severe one, he may have to keep his bed, or recline for the greater part of the day on a couch.

People troubled with piles often find it a good plan to acquire the habit of going to stool at night, immediately before retiring to rest, instead of in the morning, so as to obtain the benefit of a long rest in the horizontal position after each motion.

PLEURISY.—Pleurisy is a complaint essentially unsuited for domestic treatment, and the object of this article is not to teach people how to cure themselves, but to place before them certain facts that will enable them to recognise the disease when present, and to indicate the necessity for obtaining medical assistance.

By pleurisy we mean inflammation of the pleura, or membrane covering the lung.

The most frequent causes of pleurisy are exposure to cold and wet, sitting or sleeping in wet clothes, etc. Two cases that recently came under our notice will afford examples of its mode of production. The first is that of a young man, who went to a crowded theatre on Boxing Night, and what with the heat and crowd and excitement, got drenched with perspiration. At the conclusion of the performance he stopped talking to some friends at the corner of the street, until he was thoroughly cold, and, to use his own expression, "all of a shiver." He went into a public-house and had some hot brandy-and-water, but was unable to shake off the feeling of chilliness, and the next day he was laid up with a sharp attack of pleurisy. The other patient was a clown and gymnast in a travelling circus. One night when in the country his "tights" were not sent home from the wash until the last moment, and he found they were quite damp. It was almost time for him to appear, and he had no chance of airing them before putting them on. He went through his performance, but felt cold and chilly from his wet garments, and the result was that he, too, got pleurisy, which finally left him so weak and short of breath that he was hardly able to walk across the room, much less to amuse the public. Sometimes inflammation of the pleura occurs as the direct result of a blow or fall on the chest, and sometimes it is excited by the irritation caused by the splintered ends of a broken rib. There is reason to think that extreme muscular over-exertion, or prolonged public speaking, may produce pleurisy, even in previously healthy persons, but these cases must be rare. Not unfrequently pleurisy occurs as the result of some constitutional affection, as, for example, scarlatina, typhoid fever, or Bright's disease. When it occurs "primarily," that is, as the sole complaint, it usually attacks one side only, but when it is secondary to some other disease, it is commonly bilateral, both sides of the chest being involved.

The outset of pleurisy is in most cases marked by sharp, stabbing pains, commonly in the side or beneath one of the breasts, preceded or accompanied by shivering or a feeling of chilliness. These two signs, the stitch in the side and the shivering, are in themselves sufficient to

make us suspect pleurisy; and should there be, in addition, distinct elevation of the temperature as tested by the thermometer, our suspicion will be considerably heightened. The pain is usually aggravated by taking a deep breath, by coughing, by lying on the affected side, and by pressure. The skin is hot and dry, the cheeks are flushed, the pulse is full and quick, there is anxiety with considerable restlessness, and the urine is rather scanty and high-coloured. The breathing, at the outset especially, and while there is still pain, is considerably embarrassed, the movements of inspiration in particular being short, hurried, and often interrupted or jerking. The temperature of the body gradually rises to perhaps 103° F., but this elevation is not persistent, and it quickly falls again. Disturbances of the digestive organs, headache, and other symptoms associated with the condition of fever are present more or less. Cough is another of the ordinary symptoms, but it does not occur in paroxysms; it is small, half-suppressed, ineffectual, and is dry, or accompanied by very little expectoration. If much frothy mucus should be expectorated, it is a sign that there is also bronchitis: or if rust-coloured sputa be brought up, it is an indication that the complaint is complicated with inflammation of the lungs.

The symptoms we have enumerated may be regarded as those of a pretty sharp attack occurring in an adult. Sometimes, however, pleurisy may come on with scarcely a single noticeable symptom to arrest attention, at all events in the early stage of the malady. The pain may be vague or fugitive at first, and not become fixed and permanent for a day or two. In that case it may be mistaken for simple rheumatic pain, for muscular soreness, for pleurodynia, or for what is thought to be merely a nervous pain. In children, especially, the febrile symptoms are often inconsiderable, and the cough is not likely to attract much attention in slight cases.

We have said that by the pleura we mean the investing membrane or covering of the lung, but we ought perhaps to have explained that it is in reality a double bag, consisting of two parts, one of which covers the lung, and the other lines the cavity of the chest on the same side. Ordinarily there is no true cavity between these two layers, one bag being in contact with the other, and gently gliding over it with every movement of the chest and lung. Now in pleurisy the adjacent surfaces of the pleura get roughened as the result of the inflammation, giving rise to "friction," a rubbing or grating noise, which may be heard by the physician when he listens to the chest with the stethoscope. The inflammation may subside, leaving the pleura

uninjured, or the two layers may become more or less adherent, the patient being left with permanent shortness of breath, little or much as the case may be. Not unfrequently the inflammation results in what may be called dropsy of the chest, a clear fluid being poured out between the two bags, so as to surround the lung on the affected side. When the fluid is considerable in quantity—and sometimes it amounts to several pints—it compresses the lung, so that it cannot expand properly during respiration. The physician detects the presence of fluid in the chest by means that are simple enough to him, although they may appear somewhat complicated to those who have not had experience in such modes of investigation. In the first place he looks carefully at the chest, to see if one side is larger than the other, for it is obvious that if much fluid be present it will cause the chest on that side to bulge out. Should the bulging be not very distinct, he may measure the two sides with a tape, with the view of detecting the enlargement; but the practical physician, as a rule, trusts rather to his eye and hand than to actual measurement. It should be remembered that in many healthy people, the right side of the chest is somewhat larger than the left, from the greater development of the muscles. Then the next thing the doctor does is to place the palm of his hand on the chest, first on one side, and then on the other, making the patient speak at the same time. On the sound side he feels a vibrating movement, just as you do when you place your hand on your own healthy chest, and say, for example, “ninety-nine” in a fairly loud voice. On the side on which there is effusion nothing of the kind is felt, for the fluid fails to conduct the vibration to the chest-wall. Then the doctor percusses the chest; in other words, taps it with the tips of his fingers, interposing perhaps one or two fingers of the other hand, to prevent the patient from being hurt. On the healthy side the blow gives out a clear sound, just as you get when you tap with your finger on the upper part of your bared chest. When there is fluid present, the note given out is a dull one, similar to that you obtain when you strike your thigh in the same way. Often enough the fluid is only sufficient to half or a quarter fill the chest on one side, and then the dulness on percussion will obviously be only at the lower part of the lung. Finally, the doctor listens to the chest with his stethoscope, and hears the air entering the lung on the healthy side, but little or nothing where the fluid is. We have described these different modes of examining the chest, not that you may practise them yourself, but rather to impress upon you the necessity for having the chest thoroughly examined in any case in

which there is the slightest suspicion of lung disease. Many people put absurd difficulties in the way of the doctor, and he is sometimes—wrongly, we are sure—afraid to push his point, for fear of offending his patient. Remember that in any case of suspected lung mischief it is impossible for the doctor to do you justice unless he has an opportunity of thoroughly examining your chest; and remember, too, that often enough he will require to make several examinations before giving a positive opinion. Many people seem to think that a physician can find out what is the matter with them by listening through their clothes, but it cannot be done. You might as well ask him to listen through a brick wall.

The amount of effusion may to some extent be estimated by the shortness of breath, but the best test is the extent of dulness on percussion. In some cases the whole of one side of the chest becomes filled with matter, and this is most likely to arise in weakly constitutions, or when the inflammation has resulted from injury.

The disease with which pleurisy is most likely to be confounded is inflammation of the lungs. In both affections there are fever, cough, and shortness of breath. In pleurisy, however, the temperature is rarely very high at first, whilst in inflammation of the lungs it may reach 103° or 104° within the first twenty-four hours. The feeling of shortness of breath is usually much more distinct in pleurisy than in inflammation of the lungs. The cough in pleurisy is short and hacking, but attended with no expectoration, or with only the discharge of a little mucus; whereas, when the lungs are inflamed, the expectoration which is present in almost all cases soon becomes rusty in colour, and very thick and tenacious. Sharp, stitch-like pain in the side is a very frequent characteristic of pleurisy; whereas, in inflammation of the lungs there is commonly no pain, or it is of a duller and more diffused character. It must not be forgotten that the two affections—pleurisy and inflammation of the lungs—may coexist. Should a difficulty be experienced in making the diagnosis, it is not a matter of any very great moment, for in either case the attendance of a doctor is absolutely necessary.

There is no difficulty in distinguishing between pleurisy and a purely muscular pain. In the former case there is distinct elevation of temperature; in the latter there is none. A simple thermometrical observation will settle the question.

Cases of simple pleurisy without effusion usually terminate favourably, and the danger to life is small. When effusion has occurred, and there is fluid in the chest, the prognosis is far less favourable, and the danger

may to some extent be estimated by the occurrence of attacks of shortness of breath. Secondary pleurisy is always more dangerous than primary.

Now as to the treatment of pleurisy. Practically it may be summed up in these words: "Put the patient to bed and send for the doctor." But as medical assistance is not always forthcoming at a moment's notice, there are other measures that may be adopted pending its arrival.

A light diet of gruel, arrowroot, beef-tea, and broth, with occasional sips of cold water to allay thirst, will be found beneficial.

It is important to avoid draughts, but if in bed the patient may be allowed to assume any position that is to him most comfortable.

Linseed-meal poultices, or flannels wrung out of hot water and applied to the chest, often give relief.

A flannel bandage attached round the chest will moderate the pain by restraining the movement of the ribs.

Strapping the chest on the affected side as one would do for broken ribs, often affords immediate relief, and the most favourable results have in many cases followed this procedure. Ordinary sticking-plaster may be used, and if spread on some thick material so much the better. It should be cut into strips from three to four inches wide, and sufficiently long to extend from the spine behind to the middle line in front. These strips should be warmed before being applied, either by holding them in front of a fire for a few seconds, or what is better, by drawing their backs over a large jug of hot water. Some people dip them bodily into hot water, but this is not a good plan, for the patient is very apt to catch cold after it. The strips should not be applied horizontally, but somewhat obliquely, the alternate layers running in opposite directions. It is best to make the application from below upwards, and the patient should be directed to expire deeply as each strip is being put on. Each layer should overlap the preceding by about a third of its breadth. Finally, it is often desirable to apply over the whole two or three strips horizontally, so as to form a superficial layer, and one or two may also be passed from behind forwards over the shoulder, these being kept down by another fixed round the side across their ends. It is of course necessary to make this application only on the affected side. When this plan is not adopted the chest may be well painted with iodine liniment.

There are two drugs which may be advantageously administered internally, and these are aconite and bryony.

Aconite is most useful in quite the early stage of the complaint.

A drop of the tincture should be given in a tea-spoonful of water every ten minutes for the first hour, and subsequently hourly. Pr. 38 or T. 1 may be used. After two or three doses the skin becomes moist, contrasting favourably with the hot dry skin, urgent thirst, quick pulse, and general suspension of the secretory functions which previously existed.

Bryony is especially indicated when there are stinging, shooting, or burning pains in the side, aggravated by breathing or movement; painful dry cough, or cough with expectoration of glairy sputa; laboured, short, and rapid respirations; weariness, disposition to retain the recumbent posture, irritability, and restlessness. A dose of Pr. 49 may be given every two hours, or five drops of the bryony valoid fluid extract either alone or alternately with aconite. A recent writer says:—"In pleurisy, bryony is an exceedingly valuable drug; it is usually in the second stage, in which general pyrexia (fever) has diminished or disappeared, but exudation continues, that the best effects of the remedy are seen. It is just in those cases in which aconite is so effectively employed in the earlier feverish stage that bryony afterwards proves most useful; it limits the extent of serous effusion, and actively helps its removal by absorption."

Stimulating applications externally are undoubtedly useful, and the stabbing pain is often quickly relieved by rubbing the part with turpentine, liniment or Chatteris oil.

Iodide of potassium is a drug frequently given in the treatment of pleuritic effusion, with the view of aiding the absorption of fluid, but it is very doubtful whether it has any such effect.

By many it is considered that the tincture of perchloride of iron, given in fifteen-drop doses in a tea-spoonful of water three times a day, is a more efficacious remedy. It forms an admirable tonic and restorative in the anæmia which often follows an attack of pleurisy.

In many cases of pleurisy with effusion it becomes necessary to resort to the operation of tapping the chest. This plan of treatment has inaugurated a new era in the management of these cases, and many lives are now saved which formerly would have been inevitably sacrificed. When carefully performed by means of an instrument called the aspirator, it is not only devoid of danger, but is practically painless.

PYROSIS, OR WATERBRASH.—We have already had occasion to refer to this complaint as a symptom of dyspepsia.

It is characterised by a burning sensation at the pit of the stomach, followed by the vomiting or rather the eructation of a thin watery fluid resembling saliva, sometimes sourish, but usually insipid and tasteless, and often described by the sufferers as being cold. It is stated that it sometimes occurs without any other evidence of dyspepsia, but such is not often the case. It is, however, often a symptom of some of the more serious diseases of the stomach. It is a disorder far more common in the lower ranks of society than in the upper, and among women than men. It is of common occurrence in Scotland, and is there ascribed to the large employment of oatmeal as an article of diet. It is even more prevalent in Lapland, and is not at all uncommon in Wales, and in various parts of England where the diet is chiefly vegetable. The paroxysms usually come on in the morning and forenoon, when the stomach is empty. The first symptom is usually a pain at the pit of the stomach, often very severe, and increased on assuming the erect posture. The sufferer usually obtains relief by bending the body forwards. The pain continues for some time, and is then followed by the eructation of a thin watery fluid in considerable quantities. A case is recorded in which no less than three pints of this tasteless fluid were brought up every day. It has been supposed that when the fluid is tasteless and insipid it is formed in the mouth or throat, and does not come from the stomach at all. When, however, the fluid is acid, it may be taken for granted that at all events some of it comes from the stomach.

Next as to the treatment. It need hardly be said that when the disorder has arisen from the use of innutritious or unwholesome food, the adoption of a more generous and varied diet, including a sufficient proportion of meat, is essential. Many of the rules we have laid down regarding the diet of dyspeptics are applicable to the treatment of this complaint. In obstinate cases the most brilliant results have followed this prescription:—"When the patient is hungry, let him eat buttermilk, and when he is thirsty, let him drink buttermilk." Fresh milk is not so well borne, as it curdles in the stomach.

There are several medicinal preparations which are useful in the treatment of waterbrash.

Much benefit will be derived from taking ten drops of pure terebene or pinol on a little bit of crumb of bread every four hours.

For occasional use nothing can be better than the "soda mint" tabloids (T. 72).

Oil of cajeput in three-drop doses often proves useful.

The compound kino powder of the Pharmacopœia is an admirable remedy. It should be taken in twenty-grain doses three times a day. The only objection to its use is that it contains opium, which has a tendency to confine the bowels. This difficulty may, however, be readily overcome by administering with it some simple purgative, as the watery extract of aloes, confection of sulphur and senna (Pr. 59), or the compound colocynth pill (Pr. 60). Bismuth (T. 13) usually succeeds admirably. If the ordinary dose should fail, thirty grains of bismuth should be taken three times a day in a little water half an hour before meals.

When the fluid which regurgitates into the mouth is distinctly sour or acid, nothing succeeds like dilute hydrochloric or nitric acid given before food. From twenty to thirty drops of either taken in a wine-glassful of water half an hour before each meal will, in these cases, usually effect a cure. When the fluid of pyrosis has an alkaline reaction, and is accompanied by much distress and nausea, and the vomiting of the just-eaten food, the acid should be given in the same dose, but just after food. In obstinate cases *nux vomica* (T. 57) or *pulsatilla* (Pr. 43) may be tried.

A tea-spoonful of glycerine three times a day often proves useful.

Two Fairchild pepsin tabloids three times a day immediately after each meal often do good.

The bowels should be "kept easy" by an occasional dose of hashra tea at bedtime, or of Franz Josef aperient water in the morning.

In connection with the subject of pyrosis we may mention that rumination occasionally occurs in the human being. One of the most remarkable cases on record is that of a carpenter's apprentice. Although a sharp and intelligent young man, he was a "slow eater." In the struggle for existence, he found himself at a considerable disadvantage, for only a few minutes were allowed for meals by an exacting and ubiquitous taskmaster. It was obvious that he must either go with insufficient food, or swallow it whole and run the risk of suffocation. Having a natural dislike to hunger, he selected the latter course, and in process of time acquired the art of swallowing his food in wholesale pieces, and without any attempt at mastication. Having finished his meal, he usually repaired to the workshop, and no sooner commenced handling the implements of his craft than the regurgitation of the food commenced. As a rule, in ten or fifteen minutes after the meal was swallowed it was returned in mouthfuls, at intervals of from five to ten minutes, to be masticated and again swallowed until the whole contents of the stomach had been similarly served, when the abnormal process

ceased. This regurgitation was first noticed about the age of fifteen; soon after this young carpenter entered on his apprenticeship. For the succeeding fifteen years he invariably returned to his mouth all his food, or nearly all, until at length, as time rolled on, and as fortune and circumstances improved, he had more leisure for his meals, and more time for what may be called primary mastication, and then this striking, novel, and supplementary process of Nature became modified, and gave way in great part to the more usual, less complicated process of preparing the food off-hand for admixture with the gastric juice, and for the processes of digestion and assimilation.

REMITTENT FEVER.—(See FEVERS.)

RHEUMATIC FEVER, OR ACUTE RHEUMATISM.—Rheumatism may occur either as an acute or as a chronic disease. When it occurs in the acute form we call it acute rheumatism, or rheumatic fever.

Rheumatic fever is in this country one of our commonest, most painful, and in some respects most perilous diseases. It is perilous, not because it kills the sufferer outright, but because it too frequently lays the foundation of heart disease.

The commonest exciting cause of rheumatic fever is cold, or cold and wet combined. A young man goes out for a walk, gets wet through, comes home, neglects to change his clothes, and sits about in his wet things, gets a chill, and a few days after is taken ill, and is found to be suffering from acute rheumatism. This is a common story, and one which is familiar enough to everyone who has seen much of sickness and suffering either in the wards of our hospitals or in the privacy of home life. There are, of course, differences in detail; one person gets overheated and sits in a draught, another is put into damp sheets, and so on, but the principle is the same.

Scarlet fever is sometimes followed by a complaint which, if not identical with rheumatic fever, very closely resembles it. It is probable that the eruption of scarlet fever, by arresting the functions of the skin, acts in very much the same way as does exposure to cold and wet.

In a certain number of cases of rheumatic fever the patient is unable to attribute the complaint to any definite cause, and it is probable that when there is a strong family predisposition it may arise, as we say, spontaneously.

Rheumatism, both in the acute and chronic forms, is probably an hereditary disease, but this influence is far less marked than in the case of gout.

Rheumatic fever is principally a disease of youth, and in this respect again it differs essentially from gout. It is found to occur most commonly between the ages of sixteen and twenty.

It is rather more common in men than in women.

Its development is favoured by anything which lowers the general state of health. It is partly from this cause, and partly from the fact that they are more constantly exposed to wet and cold, that rheumatic fever occurs most frequently in those who are poor and ill-fed, and whose lot it is to toil.

Rheumatic fever is always most prevalent in climates remarkable for damp and variable weather, and it is consequently not to be wondered at that it is a very common disease in many parts of this country.

We must now proceed to consider the course of an ordinary attack of rheumatic fever. We have already supposed the case of a young man suffering from acute rheumatism as the result of exposure to wet and cold. What happens to him? At the time he probably experiences some kind of chill or rigor, although it need not of necessity be very severe. Two or three days after he feels feverish, and finds that some of his joints are affected. His temperature is high, his pulse rapid, and the whole surface of the body hot and bathed in perspiration, having a peculiar acrid or acid odour. His tongue is coated with a thick creamy fir, there is loss of appetite and usually increased thirst, with constipation of the bowels. The urine is scanty and high-coloured, and gives rise to a copious red deposit on cooling. The ankles, or perhaps the knees, are painful and powerless to bear the weight of the body; on examination they are found to be hot, tender, swollen, and somewhat flushed on the surface.

When the disorder is at its height it is difficult to conceive a more complete picture of helplessness and suffering than that to which the patient is reduced. A strong and powerful man generally unused to illness lies on his back motionless, unable to raise his hand to wipe away the drops of sweat which flow fast from his brow in the paroxysms of pain, or the mucus which irritates his nostrils. Indeed, he is so helpless that he has not only to be fed, but to be assisted at every operation of Nature. The sweat in which he is drenched brings him no relief; his position admits of no change; if he sleeps, his sleep is

short, and he awakes with an exacerbation of pain which renders him fretful, impatient, and discontented with his lot and all around him.

The duration of an attack of acute rheumatism is very variable, but it lasts, as a rule, for about twenty-one days. There is probably no disease which is more variable in its duration than rheumatic fever. Some people get over an attack in five or six days, whilst others take as many weeks before they can succeed in completely throwing it off. The pain, redness, and swelling of the joints gradually subside, the temperature falls, the sweating diminishes, the tongue becomes clean, and after a time the patient is pronounced convalescent.

So far, we have considered only a simple case of rheumatic fever, in which the inflammation has been limited to the joints. In a large number of cases the disease extends to the pericardium, or bag or membrane which encloses the heart, giving rise to the disease which we call "pericarditis." This inflammation may result in the formation of a quantity of fluid in the pericardium surrounding the heart, and then we have a condition of "pericardial effusion." Frequently the inflammation attacks the endocardium, or membrane lining the heart, and then we have what is called "endocarditis." Sometimes the substance of the heart itself is attacked, and then we have that condition which we speak of as "myocarditis." In fact, in nearly all cases in which there is pericarditis or endocarditis there is more or less myocarditis. The occurrence of these complications is a matter of very serious moment to the patient. Sometimes they set in with pain and tightness in the chest, but they may come on quite insidiously, and without anything to attract attention to what is going on. The medical man can always detect their existence by carefully listening over the region of the heart; and it is for this reason that he is always so particular to examine the chest with his stethoscope every day. Were he not to take this precaution he would have very little real knowledge of the progress of the case.

Pleurisy sometimes occurs as a complication of rheumatic fever, but far less commonly than heart disease.

The inflammation in rheumatic fever is seldom confined to one joint, but shifts about in the most erratic manner. This morning, for example, the pain may be confined to the right knee, a few hours later it may have entirely subsided, whilst before night it may re-appear in the corresponding joint on the opposite side, or perhaps in the ankles or wrists. This "metastasis," as it is called, is always a marked feature

of acute rheumatism. In the majority of cases in the first attacks only the larger joints of the body are affected.

The pain in the joints is generally very severe, but less intense than in gout. A humorous Frenchman, endeavouring to convey his idea of the relative pains of gout and rheumatism, once said, "Place your joint in a vice, and screw the vice up until you can endure it no longer. That may represent rheumatism. Then give the instrument another twist, and you will obtain a notion of gout."

The temperature of the body, as estimated by the thermometer, is usually elevated by some three or four degrees. The rapidity of the pulse is in acute rheumatism no guide to the amount of fever, as the existence of heart disease as a complication would tend to influence its rate. To arrive at a knowledge of the amount and severity of the fever, it is absolutely necessary to employ the thermometer.

The smell of the perspiration in this complaint is very characteristic, and will often enable the practised observer to make a shrewd guess as to the nature of the illness from which the patient is suffering before asking a single question.

A person who has once suffered from rheumatic fever is very likely to suffer from it again. The occurrence of one attack imparts a great susceptibility to the system for its return, and this is increased with every successive attack, so that after a time the patient is liable to become the victim of frequent seizures. It very commonly happens that the second and third attacks are less severe than the first.

Sometimes the disease assumes a sub-acute form, intermediate in its characters between chronic rheumatism and rheumatic fever. In these attacks there is usually slight swelling, heat and tenderness of the joints, but there is very little, if any, fever. Even in patients who have suffered long and severely from repeated attacks of acute or sub-acute rheumatism it is unusual to find that any deformity or alteration in the shape of the joints has been produced.

We have already had occasion to refer incidentally to some of the chief points in which gout and rheumatic fever differ. It is, however, a matter of convenience to have these facts arranged in a tabular form. It is of the greatest importance to be able to distinguish the two diseases, for gout is readily amenable to the influence of colchicum, whilst acute rheumatism is but little influenced by its administration.

DIFFERENCES BETWEEN GOUT AND ACUTE RHEUMATISM.

Gout.

Age.—Occurs most commonly in people over thirty.

Sex.—Occurs much more frequently in men than in women.

Hereditary.—Is decidedly hereditary.

Social Condition.—Occurs most commonly in those who live luxuriously.

Joints.—In earlier attacks usually affects only one joint at a time, and most commonly the great toe.

Chalk-stones.—Often associated with the formation of chalk-stones.

Perspiration.—Profuse perspiration not common.

Heart.—No tendency to inflammation of the membranes of the heart.

Acute Rheumatism.

Occurs most commonly in young people.

Occurs with almost equal frequency in the two sexes.

Is hereditary, but not very decidedly.

Is the lot of the poor and ill-fed.

Usually attacks the larger joints of the body, and frequently several at once.

Never leads to the formation of chalk-stones.

Profuse acid perspiration a prominent symptom.

Heart frequently affected.

We must now consider the course of treatment to be adopted in cases of rheumatic fever.

As this is not a contagious disease, there is no necessity for isolating the patient. The usual precautions should be taken for ensuring cleanliness and thorough ventilation of the room and all that it contains. The patient must, be confined to bed, and should be kept as quiet as possible both physically and mentally. As profuse perspiration is a prominent symptom of the complaint, the sufferer should lie between the blankets, and not in the sheets. Linen when wet or damp is apt to strike cold, and is not only unpleasant, but very likely to prove dangerous to the patient. A sudden check to the perspiration cannot fail to be injurious, and may even lead to a rapid transference of the inflammation from the joints to the heart. It should always be remembered that rheumatic fever is a very painful complaint, and that the touch of the physician, the handling of the nurse, or even the shaking of the bed by the footstep of an approaching friend, may cause the sufferer the most exquisite pain.

Respecting the diet there is little to be said. When the fever runs high, food can be advantageously given only in the liquid form. Milk is one of the best kinds of nourishment which can be administered for the maintenance of the strength. When it is not readily assimilated, and proves too heavy for the stomach, it may be peptonised or mixed with an equal quantity of soda-water or with lime-water. Besides

milk, beef-tea, mutton-broth, jellies, arrowroot, and other similar easily digestible substances may be given. To allay the thirst, soda-water, lemonade, toast-and-water, or even plain iced water will be found useful. Iced coffee with Rosbach water is a palatable drink, especially if a lump or two of sugar be added. Wine or brandy is in young people seldom required, unless indeed there be much depression, as the result of heart mischief.

As the fever abates, a more generous diet may be allowed, commencing with light rice, or sago, or arrowroot puddings, and gradually progressing to white fish and fowl, and then to beef and mutton. The more the strength of the patient can be maintained, the less tedious will be the recovery.

A number of different drugs have been recommended for the treatment of acute rheumatism — a fact which may be taken as an indication that we are at present acquainted with no specific for the disease.

The nearest approach to a specific for acute rheumatism will be found in salicine, a substance obtained from the willow. It should be given in twenty-grain doses in an ounce of water every two hours, according to Pr. 12; or the tabloids (T. 68), which contain five grains in each, may be used. In very bad cases it may be given every hour until the pain is relieved. Much larger quantities have been given without the production of any inconvenience. Given quite at the commencement of the illness, it will sometimes quickly cut short an attack. In cases in which it does good the beneficial action is usually apparent within twenty-four, and always within forty-eight, hours of its first administration. In acute cases the relief of pain and the fall of temperature usually occur simultaneously, but in sub-acute cases the pain is sometimes decidedly relieved before the temperature begins to fall. It is claimed for salicine that it prevents the occurrence of heart disease, but the evidence on this point is inconclusive. Although this drug proves beneficial in the large majority of cases of acute rheumatism, it sometimes fails. In cases in which benefit has been experienced from its administration, it should be continued in ten-grain doses every four hours for a week after the temperature has fallen to the normal. The influence of salicine on the temperature in acute rheumatism will be seen by reference to the chart given in the article on TEMPERATURE.

Salicylate of soda is often given in place of salicine in these cases, and often with very much benefit. It can be obtained in five-grain tabloids, and three of these should be taken every four hours for forty-

eight hours, or until the more acute symptoms have subsided. The tabloids often produce singing noises in the ears and temporary deafness; but this is not a matter of any great importance.

Salicylic acid has also been used in the same way as salicine, but it is very insoluble in water, is nasty to take, and is not readily obtained pure.

When the acute symptoms have subsided, benefit may be experienced from taking three tabloids of Salol three times a day.

Aconite has been highly praised by many authorities in the treatment of acute rheumatism, and there can be no doubt of its usefulness. In many cases, however, it must be admitted that its administration appears to be ineffectual. It is especially indicated when the fever is high and there are violent shooting or tearing pains, worse at night, and aggravated by the touch. The most successful results are obtained when it is administered quite at the commencement of the disease. The aconite mixture (Pr. 38) may be used, the dose being a tea-spoonful every second or third hour. This is not at all equal to the salicylate of soda treatment.

Bryony may be given when the patient suffers from lancinating or stitching pains, apparently affecting the muscles rather than the bones, and increased on the least movement, but improved by rest. It may be given according to Pr. 49.

When the pain in acute rheumatism is very severe, it may be necessary to administer opium. A small dose of laudanum—say, ten drops—may be given by the mouth, but is merely a palliative, and it exerts no influence on the progress of the disease.

Small blisters in the neighbourhood of the affected joints often prove efficacious in relieving the pain.

By some people the administration of nitre in rheumatic fever is supposed to be attended with favourable results. As much as two or three ounces of the salt, dissolved in plenty of water, have been taken in the twenty-four hours without causing any inconvenience; but there is no evidence to show that these large doses do any good. Another objection is that unless the perspiration is very profuse patients are unable to take the large quantities of fluid in which the salt must, of necessity, be dissolved.

Bicarbonate of potash has been frequently given in thirty-grain doses every four hours. In many cases it relieves the pain, but it is unavailing in lessening the intensity or duration of the fever.

Large doses of tincture of perchloride of iron—from twenty to thirty

minims every four hours—are sometimes given; but we do not recommend this mode of treatment.

In some cases benefit has been derived from the administration of lime-juice in doses of eight ounces daily.

Colehicum is useless in this disease.

There can be no question as to the value of the cold pack in acute rheumatism. When the pain is too great to admit of the patient being moved, the front only of the body should be packed, and a cold compress, renewed every two or three hours, should be wrapped round each of the painful joints. In cases in which there is a prejudice against the cold pack, the body should be thoroughly sponged with tepid or cold water several times a day, using soap if the perspiration is offensive. There is not the slightest fear of increasing the liability to heart mischief by the adoption of this method of treatment.

It will be seen from what we have said that there is great discrepancy of opinion respecting the treatment of acute rheumatism. Some doctors have even gone so far as to assert that all remedies are useless, probably assenting to the dictum of a celebrated physician, who, when asked what was good for rheumatic fever, replied, "Six weeks." It should be remembered, however, that that was before the days of salicine and salicylate of soda.

Individuals who have once suffered from rheumatic fever must be extremely careful as to their clothing; they should always wear a flannel vest and drawers, which may vary in thickness at different periods of the year. The feet should be kept dry and warm, and every precaution taken to avoid catching cold.

In all cases of rheumatic fever the attendance of a medical man is necessary.

In conclusion, we should wish to say one word of comfort: and that is, that however bad the attack of rheumatic fever may be, and even when it is complicated by heart disease, it seldom or never proves immediately fatal.

RHEUMATIC GOUT.—The term "rheumatic gout" is one which is employed somewhat loosely both by medical men and the public. It is not uncommon to hear gouty people say that they are suffering from rheumatic gout, simply because the disease which for years was manifested in the feet only now implicates other joints, as the elbows and hands. In fact, the same malady is often regarded as gout when it is

confined to the feet, and ^{is}as rheumatic gout when it affects the upper extremities. Sometimes the sub-acute forms of rheumatism are improperly called rheumatic gout, particularly when they affect the upper extremities. There is, however, a third disease which is neither gout nor rheumatism, but quite distinct from both, and it is this which it is our intention to discuss under the term of rheumatic gout. The ordinary technical term for this complaint is "rheumatic arthritis," but it is sometimes known as "nodosity of the joints."

True rheumatic gout may occur either as an acute or as a chronic disease, but as the latter form is much the more common, it is to this that our attention will be principally directed.

Chronic rheumatic gout may occur in either sex, and at almost any age. The ordinary course of the disease is somewhat as follows:—A young woman who is decidedly out of health, perhaps as the result of over-work and confinement to the house, catches cold, and after a few days experiences some pain in one of her knees, and on examination slight swelling and tenderness are detected. As the result of rest and judicious treatment, the pain subsides, and no more is thought of the matter. A few weeks later, or it may be months, the patient catches another cold, and the same or another joint is affected in a precisely similar manner. On this occasion, however, treatment is apparently of no avail, and the inflammation, instead of subsiding, gradually spreads to other parts. After a time, almost every joint in the body may be affected, the complaint causing great distortion and deformity. These changes take place slowly, and may be attended with but little disturbance of the general health. In confirmed cases the hands are usually thin, from the absorption of fat and wasting of the soft tissues, and the knuckles are greatly enlarged, so as to form big lumps, or nodes; sometimes the fingers are so bent and distorted one over another that they are for all practical purposes useless. The elbow in many cases cannot be straightened, and the wrists are rigid, and scarcely admit of motion in any direction. The knee is commonly much enlarged and rounded, and is often bent with difficulty. Sometimes, in very bad cases, the patient is rendered helpless and a cripple for life.

When the disease commences in the acute form, it closely resembles rheumatic fever; several joints are attacked, the swelling is considerable, and there is distinct increase in the temperature of the affected parts, with pain, tenderness, and redness. In this complaint the profuse sweating which is so prominent a symptom of rheumatic

fever is entirely absent, and the inflammation exhibits no tendency to fly from joint to joint, or to attack the heart or its membranes.

Rheumatic gout, as we have seen, is not a disease which is confined to any particular age. It sometimes occurs in children of from ten to twelve, and has been known to commence in very old people, above seventy. It is commonly thought that women are more likely to be attacked than men; and it is a recognised fact that any irregularity in the menstrual functions predisposes to its occurrence. It is not hereditary: a point in which it differs very markedly from gout. Everything which causes debility or loss of tone in the system, as, for example, an attack of bleeding from the womb or elsewhere, deep or prolonged grief, or severe or protracted mental anxiety, acts as a predisposing cause to the disease. It is said in some cases to have resulted from rapid child-bearing and from over-suckling. Cold is frequently an exciting cause, particularly if combined with depression of the functions of the nervous system. Malt liquors and wines exert no influence on its production.

It is of the greatest importance to be able to recognise the nature of the disease in cases of rheumatic gout, for upon its correct understanding often depends the future comfort and physical well-being of the unfortunate sufferer. It is often—too often—mistaken either for gout or rheumatism. From an attack of acute gout it may be distinguished by the duration of the complaint, by the large and small joints being equally attacked at the onset, and by the great toes not being specially involved. Rheumatic gout is a progressive disease; it has no intermissions, for during the whole of the patient's life the nodes go on gradually enlarging, and impeding more and more the motions of the limb. The malady spreads from joint to joint, without any alleviation in those which have been once attacked. In very chronic cases it is often only from the history of the onset that one is able to distinguish gout from rheumatic gout. In chronic rheumatism one seldom meets with the distortion of the joints which is so characteristic of the complaint now under consideration.

We must now consider the best method of treating this disease. It must always be borne in mind that it is a very intractable disease, and that in many cases all treatment proves unavailing. The most favourable cases of treatment are naturally those in which the disease is not far advanced, the affected joints few in number, and their mobility but partially interfered with. When treatment is resorted to quite at the commencement of the complaint, the disease may sometimes

be eradicated from the system and a complete recovery may be the result.

In all cases a sustaining plan of treatment is imperatively demanded.

All lowering treatment tends materially to increase the rapidity and severity of the disease.

Colchicum, which does so much good in gout, is worse than useless; hence the importance of distinguishing between the two diseases.

Everything that can be done should be done to support the strength of the patient. If the disease is due to loss of blood, and there is anæmia, the different preparations of iron are earnestly called for. A selection should be made from Prs. 1, 2, 3, and T. 15 and 65. When, in addition to the bloodlessness, there is a relaxed habit of body, the more astringent preparations—as, for example, Prs. 1 and 2—are indicated.

When the nutrition is imperfect from any cause independent of anæmia or loss of blood, cod-liver oil will be found of advantage. It is especially indicated in patients of spare habit, and when the disease has been attended with wasting. When cod-liver oil cannot be taken, the Kepler Extract may be substituted. When the complaint arises from depressing mental causes, such as anxiety, grief, or prolonged attendance on the sick, *nux vomica*—ten drops of the tincture in a wine-glassful of water three times a day—quinine (T. 63), or ammonia and bark (Pr. 13) may be administered with advantage.

Iodide of potassium (T. 47) is of service, especially when the pains are worse at night. Sometimes, when no benefit is experienced from the ordinary five-grain doses, relief may be obtained by increasing it to ten, fifteen, or even twenty-grain doses three times a day. It must be remembered that iodide of potassium is somewhat of a lowering remedy, and its effects should therefore be carefully watched. The syrup of iodide of iron (Pr. 4) taken twice a day, and continued for some months, may prove of benefit; and it is said by some to have the power of completely arresting the progress of the disease.

Arsenic is undoubtedly of considerable value. The indications for its employment are unknown, and its action is apparently somewhat capricious. In some cases it acts like a charm: stiffened joints for a long time considerably enlarged becoming reduced to their natural size, and finally regaining their suppleness. Large doses—as, for example, five drops of the arsenic solution, or its equivalent, five tea-spoonfuls of the arsenic mixture (Pr. 40), three times a day—are

necessary to produce this result. This treatment should be resorted to only under the immediate direction of a medical man, as some people are very susceptible to the action of the drug, and it is necessary to know when to stop its administration. It should always be borne in mind that the medicine may have to be taken with but slight intermissions for weeks or months, and that if an improvement does not speedily ensue, it is no proof that the medicine will ultimately prove ineffectual.

Salol is in many cases useful. Three of the five-grain tabloids (T. 70) should be taken three times a day, after meals.

Actæa racemosa (*cimicifuga*) yields very satisfactory results in many cases of rheumatoid arthritis. It proves most successful when the pains are worse at night, and it is especially indicated when the disease is traceable to some derangement of the womb, a sudden suppression of the periods, an abortion, or a painful and difficult confinement. It is also indicated where the complaint first makes its appearance at the "change of life." The joints may not be enlarged, and the pains may flit from joint to joint instead of lodging steadily in one place. Painful cramps of the leg, aggravated by cold and wet weather and by certain winds, frequently torment the sufferer, and break his rest at night. *Actæa* not only frequently gives relief from the pain and cramps, but induces quiet and refreshing sleep. In addition to these cases, *actæa* sometimes proves of service when the disease occurs in men, and even when the pains are worse during the day. The *actæa* may be given in ten-drop doses of the *actæa racemosa* valoid fluid extract in a little water every three hours.

External applications, such as amber oil or Chatteris oil, well rubbed into the affected joints before the fire, often afford relief to the pain which is so distressing a symptom.

In many cases local applications prove of service. In the early stages, when there is tenderness and swelling of the joint, temporary relief may be obtained by the application of a blister. When the affection has become chronic, and blisters have effected all they are capable of accomplishing, the application of narrow strips of plaster, one over another, so as to support the joint, may do good. Simple spirit lotions or belladonna liniment well rubbed in will sometimes ease the pain. Friction is usually not only serviceable, but grateful. The joint may be well sponged with strong brine, and then rubbed dry, so as to cause the salt to be absorbed.

Baths are very useful, especially when the skin is sluggish in its action, but care should be taken that they are not repeated sufficiently often to produce debility. The Turkish bath is often of the greatest service in these cases. The cold, or in winter, tepid, douche may be played for about two minutes on the affected joint, which should then be rubbed till it is quite warm and dry. The use of hot sulphur baths often proves of service in chronic cases. An arsenic bath is sometimes employed. It is made by adding to the water four ounces of common washing soda and twenty grains of the salt known as arseniate of soda.

Respecting the diet little need be said. The patient should, if possible, live generously, and beer, wine, or spirits may be taken in moderation. For people whose pecuniary circumstances will admit it, a frequent change of air and scene is to be advocated. Prolonged mental exertion is hurtful, and all causes of anxiety should as far as possible be avoided. A removal to a moderately warm, dry, bracing climate during the winter months is to be advocated. There can be but little doubt that as a rule many of the foreign saline and alkaline waters, such as those of Carlsbad, Wiesbaden, and Vichy, do more harm than good. The springs most adapted for the subjects of rheumatic gout are those which contain iron in some easily digestible form.

RHEUMATISM, CHRONIC.—Chronic rheumatism is a complaint with which few elderly people are altogether unacquainted. It is sometimes the sequel of rheumatic fever, but more frequently a separate constitutional affection, coming on quite independently of any previous acute attack. There is at first only slight constitutional disturbance, but the sufferer is constantly annoyed and his existence at length rendered miserable by wearing pains, causing him many a restless night, and destroying all comfort during the day.

The joints which are most frequently the seat of the pain are the knees, ankles, hips, and shoulders. Redness is seldom present in chronic cases, but stiffness and swelling of the joints are common accompaniments of the complaint. In many cases pain is for a long time the only symptom, and even this may be latent unless the part be moved. In some instances the pain is worse at night, being aggravated by the warmth of the bed, but in others warmth affords the greatest relief. It often exhibits great tendency to shift from joint to joint, often subsiding and then recurring. It is usually aggravated by vicissitudes of weather,

and especially by the prevalence of east winds and cold and damp states of the atmosphere.

Chronic rheumatism is most common after thirty, and is especially prevalent among the labouring poor, and those who are exposed to changes of season and weather, and to cold and wet. It is not, however, by any means confined to the poorer classes, for it frequently attacks those whose lot absolves them from the necessity of earning their daily bread. In many cases it is associated with, if not dependent on, derangement of the digestive organs. It is frequently of syphilitic origin, the pains of secondary syphilis being not uncommonly confounded with those of chronic rheumatism.

We must now consider the different methods of treating chronic rheumatism. It is desirable, in the first place, to pay attention to the condition of the general health, and should this be below par, steps should be taken to improve it. Care should be taken to see that the organs of digestion are in proper working order, and that digestion is performed naturally and easily. Such evils as indigestion and constipation should be removed with as little delay as possible. The patient must be protected against atmospheric vicissitudes by warm clothing, and should be eased in flannel from the neck downwards.

Chronic rheumatism, as everybody knows, is a very obstinate complaint, and many different remedies have been used or suggested for its cure. The medicine may be given internally, or the treatment may be purely local, or both methods may be combined. We will speak first of the internal remedies.

Iodide of potassium is a most valuable medicine for this complaint. It is especially indicated when the pain is *worse at night*. As we have already said, the pains of secondary syphilis cannot, as a rule, be distinguished from chronic rheumatism, but the nocturnal increase of suffering is to be regarded as an indication for the employment of iodide of potassium, whether the pain is referable to rheumatism or to some other cause. The fact of a patient suffering from a syphilitic taint would increase the chances of this remedy proving successful. Two table-spoonfuls of the iodide of potassium mixture (Pr. 32) or one of the tabloids (T. 47) should be taken three times a day.

Salicine, which succeeds so admirably in acute rheumatism, often does good in the more chronic forms. Salicylate of soda or Salol are both useful. All three drugs are conveniently given in the form of tabloids (T. 68, 69 and 70).

Rhus toxicodendron, the poison-oak, is useful in rheumatic lameness

of the lower extremities. It is indicated in all cases of rheumatism in which the pain is worse when at rest, but is relieved by motion. It also does good where on first moving after rest the pain is increased, and relief is not experienced until gentle and constant motion has been continued for some time. Drop doses of the tincture of *rhus* may be given in a tea-spoonful of water every two hours. This drug is often somewhat tardy in its action.

Actæa racemosa is useful in many forms of chronic rheumatism of the joints, and is more likely to do good when the pains are worse at night or in wet or windy weather. It has been found by an eminent writer on treatment to be of signal benefit in the following class of cases:—The patient is at first troubled with pains, apparently rheumatic, in most of the joints, unaccompanied by fever or swelling. The disease soon seats itself in one part, as the wrist and hand; the tissues here become much thickened and the bones enlarged, till after a time all movement is lost and the member becomes useless. Warmth allays the pain, and it almost ceases at night. The attack presents many of the characters of gonorrhœal rheumatism, but there is no history of gonorrhœa. *Actæa* will often give instant relief in these cases, and restore the joints to their original suppleness and usefulness after iodide of potassium and other remedies have been tried in vain. It may be given in five-drop doses of the *actæa racemosa* valoid fluid extract every three hours in a table-spoonful of water.

Aconite (T. 1) is often of service, and is more especially adapted to rheumatism of the shoulder and other large joints.

Pulsatilla (Pr. 43) often affords relief when the knee, ankle, or instep is the seat of the complaint. It is especially indicated when the pains fly from place to place. It nearly always proves useful when the patient is a delicate female suffering from some irregularity of the periods.

Bryony (Pr. 49) is useful chiefly when the lower limbs are affected. It is especially indicated when the pain is increased by motion. It has been found to succeed best in people of dark hair and complexion.

Nitrate of potash is indicated when the pains are accompanied by scanty high-coloured urine, becoming turbid on cooling. Ten grains of the salt dissolved in water, and taken hourly or every two hours, will, in most cases, soon increase the flow of urine and render it clear and limpid, when the rheumatic pains generally decline.

In this particular form of the complaint diuretin is useful. Two

five-grain tabloids should be dissolved in a little warm water, sweetened to taste, and taken twice a day: at eleven in the morning and four in the afternoon.

Lime-juice, taken in doses of from six to eight ounces daily, will sometimes prove successful when everything else has failed. It is not uncommon to hear people say that they have gone the whole "round of the doctors" without experiencing any benefit, and then cured themselves by taking lime-juice.

Guaiacum is often employed, especially in what is called "cold" rheumatism, in which the symptoms are relieved by warmth. Half-drachm doses of the ammoniated tincture of guaiacum may be given every four hours in milk. It is the chief ingredient in the remedy known as "Chelsea Pensioner," which has obtained a great reputation with many old soldiers as a cure for "rheumatics." Its composition is as follows:—

CHelsea PENSIONER.

Take of Powdered guaiacum, an ounce.
Powdered rhubarb, two drachms.
Bitartrate of potash, a drachm.
Sublimed sulphur, a drachm.
Powdered nutmeg, half a drachm.
Honey, a pound.

To be mixed thoroughly. Two large table-spoonfuls to be taken night and morning.

Another formula is:—

Take of Powdered guaiacum, a drachm and a half.
Mustard powder, three drachms.
Sublimed sulphur, three drachms.
Powdered rhubarb, forty-five grains.
Nitrate of potash, forty-five grains.

Mix thoroughly. A tea-spoonful of the powder may be taken in milk at bed-time, or sufficient honey, treacle, or glycerine may be added to form an electuary, and of this a tea-spoonful may be taken.

We may mention incidentally that "Chelsea Pensioner" is useful in torpidity of the bowels, and is well adapted for the obstinate constipation of elderly people.

The guaiacum and sulphur tabloids, containing in each three grains of guaiacum resin and three grains of precipitated sulphur, are very useful. One to three tabloids should be taken three times a day, either alone or stirred up in milk.

So much, then, for the internal remedies for chronic rheumatism.

Let us now consider what local applications are at our disposal for the treatment of this obstinate complaint.

Iodine liniment may often be painted around the affected joints with advantage. It in many cases quickly relieves the pain.

When the pain is confined to one joint, a mustard or linseed poultice will often afford relief.

Capsicum liniment and Chatteris oil are useful applications for rubbing into the affected joints.

The application of flowers of sulphur often proves of use. When the complaint is situated in the lower extremities, it is not by any means a bad plan to resort to the old-fashioned custom of dusting the inside of the stockings with sublimed sulphur. A sulphur and linseed-meal poultice, equal parts, may be tried. The local application may be combined with the internal administration of sulphur, the dose being twenty or thirty grains in milk.

Concentrated essence of Jamaica ginger often proves efficacious. A tea-spoonful should be taken two or three times a day in wine and water, or some other vehicle, and the affected part well rubbed with a mixture of equal parts of the essence and brandy. Should no benefit be experienced, a piece of flannel should be wetted with this mixture and worn on the part, the application being repeated as often as the skin will bear it.

There are several accessory means of treatment which may be adopted with advantage. For instance, the dull aching in the joints which often remains after an attack of acute rheumatism will often yield to galvanism. This is a mode of treatment which is most likely to prove of service when only one or two joints are affected. The cold douche is often useful in removing the pain and stiffness of joints crippled by chronic rheumatism.

The cold pack is also frequently successful in these cases.

Warm baths are of great service, and especially baths of salt water at a temperature of not less than 100°.

The Turkish bath will in many cases afford prompt and complete relief; and this is a mode of treatment which we have in many cases seen followed by the most satisfactory results.

Very frequently a course of massage proves successful.

When the symptoms are very chronic, the cold sulphurous waters of Harrogate or the hot sulphur springs of Aix-la-Chapelle may be resorted to.

Sometimes drinking the alkaline waters of Vichy will do good, or

when there is constipation in addition to the rheumatism, benefit may be experienced from a course of Carlsbad waters.

For rheumatic people who can afford it, Ventnor, Hastings, Rome, and Nice would be good winter quarters. A temporary residence at a hydropathic establishment, such as Ben Rhydding or Limpley Stoke, might prove beneficial.

It may be said that we have here a very large number of remedies recommended, but which should we begin with? In the majority of cases we should commence treatment with the iodide of potassium mixture and the Turkish bath. We believe that iodide of potassium is, of all others, the drug which proves most successful, and it may effect a cure even in cases in which the nocturnal exacerbation is not a prominent symptom.

We cannot leave the subject of rheumatism without saying a few words on what is known as gonorrhœal rheumatism. This affection consists of inflammation of and about the joints, following an attack of the complaint from which it derives its name. It differs from ordinary rheumatism in many important respects. In from ten days to three weeks after the establishment of the primary disease, one or more of the joints become stiff, painful, and swollen, possibly as the result of the patient having got a chill from exposure to the weather, or from sitting in a draught of cold air. At the same time the feet may be painful, there may be some inflammation about the eyes, and there will be considerable fever, with dry skin and a furred tongue. The knee is more frequently affected than any other joint, possibly because it is a large and complicated structure, but little protected by muscles from atmospheric influences. The complaint occurs almost exclusively in men, and after the first attack the patient is exceedingly liable to a recurrence. Each attack is usually more virulent in its character than the preceding. After the first visitation slight stiffness may remain for several weeks, and the result of several attacks may be the occurrence of a permanently stiff and disabled joint, leaving the patient a cripple for life.

When the patient has reason to believe that he is suffering from this variety of rheumatism, he should at once consult a medical man, and lay the whole facts of the case before him. If the patient is foolish enough to suppress any part of the history, he may pay a penalty of lifelong misery.

When the complaint is vigorously treated at the very commencement of the attack, its progress may sometimes be arrested. When there is

much constitutional disturbance, antifebrile treatment will have to be resorted to, and it may even be necessary to abstract a small quantity of blood from the arm by bleeding. Leeches applied to the inflamed joints often aggravate the symptoms, and do more harm than good. The constant application of poultices or hot fomentations to the affected joint, which must be kept absolutely at rest, will prove advantageous. The Turkish bath may be resorted to with benefit, the pain often quickly subsiding on the occurrence of profuse perspiration. Abstinence from meat and stimulants is usually absolutely necessary.

In chronic cases a combination of the iodide of potassium mixture (Pr. 32), with the frequent employment of the Turkish bath, is most likely to do good. A capsicum or menthol plaster applied over the painful joint, or one or two small blisters, about the size of a shilling, may prove of service. When the patient is much pulled down, it may be necessary to keep up the strength by a slight stimulating and tonic treatment. When the pain and swelling have completely subsided, gentle friction with lanoline cream may restore mobility to the affected joint. Sometimes it is necessary, in order to restore motion, to manipulate the limb after the patient has been placed under the influence of chloroform.

In conclusion, we would say that gonorrhœal rheumatism is not a complaint to be trifled with, and no man is justified in endeavouring to treat it himself.

RHEUMATISM, MUSCULAR.—This is a complaint which is usually regarded as being closely allied to rheumatism of the joints, the difference in the symptoms being supposed to depend on the peculiarities of the structures which are affected in the two diseases. Doubt has, however, been thrown upon the correctness of this opinion from the circumstance that the complaint now under consideration is never complicated by any disease of the heart or of its membranes.

Muscular rheumatism usually commences as an acute disease, but exhibits a decided tendency to become chronic. It may affect any of the muscles of the limbs or trunk, but is far more likely to occur in certain situations than in others. The seizures are not uncommonly quite sudden—for example, the patient may find on awaking in the morning that he is unable to make a certain movement, or to perform some particular act, without experiencing the most exquisite pain. Usually there is no pain whilst the muscles of the part are quiet, but

the slightest movement suffices to excite a paroxysm. On examining the seat of suffering, nothing can as a rule be detected, but sometimes there is slight tenderness on pressure. There is often no fever or constitutional disturbance—at all events, at first; but as the complaint progresses there may be thirst, loss of appetite, and even considerable elevation of temperature, as the result of the long-continued pain, and the want of sleep which it occasions.

We know very little respecting the causes of muscular rheumatism. It is most commonly met with in people of full adult age, and not uncommonly in individuals of a gouty habit. Exposure to cold and damp and the over-use of the affected part may act as exciting causes. One attack of the disease engenders a liability to its return.

The duration of the complaint cannot be definitely fixed. As an acute disease, it is usually of brief duration, but in the chronic forms it often proves very rebellious to treatment, and its duration may be protracted almost indefinitely.

Muscular rheumatism is not confined to any particular region of the body, but may occur in almost any locality. The principal varieties are lumbago and crick in the neck, and we shall speak of the treatment of the complaint under these two headings:—

A. *Lumbago*.—This is a rheumatic affection of the muscles of the loins, those on one or both sides being involved. It is frequently very sudden in its mode of onset, the pain seizing the patient “all of a moment.” The pain is usually increased by every movement of the lower part of the spine, and by pressure upon the muscles of the affected part. It is not uncommon to see patients with lumbago leaning forwards and walking almost double. If they are told to “touch their toes” they generally express their inability to do so, although in many cases it appears on investigation that the pain is caused not so much by bending down as by the effort to get up again. Sometimes, however, the mere effort of stooping is very painful. We remember being told a story which forcibly illustrates this fact. The patient was a butcher by trade, and his lumbago had been caused by lifting heavy weights and carrying the carcasses of sheep, bullocks, etc., on his back. His complaint was very obstinate; he was incapacitated from following his ordinary occupation, and, being unable to obtain other work, was in a few weeks reduced to the brink of starvation. One day, when very “hard up,” he was strolling in Regent’s Park, when he saw a sixpence lying in the grass. It seemed almost a godsend to him, and he was on the point of stooping down to pick it up when the pain in the loins seized him, and

he was unable, in spite of his utmost efforts, to get near it. He described very graphically how he stood for over an hour looking at the sixpence, and fearing every moment that someone should come up and claim it. The method he finally adopted of obtaining the long-coveted treasure was, we trust under the circumstances, not very culpable. Seeing a little girl playing on one of the adjoining walks, he called her, and said, "Here, my dear: I've just dropped sixpence. Will you pick it up for me?" and in another moment it was in his possession. In this instance the patient was as powerless to stoop down and pick up that coin as if he had been paralysed. He had not actually lost the power of moving, there was no palsy, but he dared not move, because the effort gave him so much torture.

The remedies for lumbago are, as might be supposed, chiefly local. There are, however, other methods of treatment which are often attended with satisfactory results.

When the pain is very severe, relief may, in the majority of cases, be obtained almost immediately by an injection of morphine under the skin. This has been known to medical men and extensively employed with advantage for many years. The only objection that can be urged against it is that in many people morphine gives rise to headache, giddiness, and other unpleasant symptoms. Quite recently a French physician made a somewhat curious discovery. He had a patient whom he had frequently treated with hypodermic injections of morphine for acute attacks of lumbago, but always with the production of a train of unpleasant constitutional symptoms. One day the patient called to say how glad he was to find he had made some alteration in the medicine, for the last injection had relieved the pain as usual, but had not produced any headache or giddiness. The doctor at once declared that he had used the same morphine solution, and in order to convince the patient, sent for the bottle to show him. On examination, the bottle was found to contain nothing but water, and an inquiry being instituted, the servant confessed that some days before she had accidentally upset the bottle and spilled the contents, and that, fearing detection, she had filled it with water. The doctor at once saw that the fact was of value, and hastened to publish the discovery to the world. It then appeared from the testimony of numerous trustworthy observers that even the water was not essential, that it was the puncture with the needle which did good, and that equal benefit might be obtained without the injection of any substance at all.

The treatment of lumbago by "acupuncture," as it is called, is attended with the most favourable results. The mode of procedure is very simple. The patient stands upright, holding up his shirt behind so as to expose the loins. The only apparatus required is a good, strong, sharp needle, such as is ordinarily used as a shawl-pin. The person who is about to perform the friendly office for the patient grasps the needle firmly in his hand, and suddenly thrusts it for the distance of an inch or two into the loins over the painful part. The pain of the puncture is but momentary, and the needle, instead of being withdrawn, may be advantageously left sticking in for a few minutes. When the lumbago is double, the operation should be performed on both sides of the loins. We have cured many cases of lumbago by this method, and have never known it to be followed with any unpleasant consequences. Most instrument-makers keep needles fitted in bone handles for the performance of this operation, but the domestic substitute to which we have referred will answer equally well.

The Turkish bath, which is such a valuable remedy for nearly all complaints of a rheumatic nature, may be used with advantage in lumbago.

When a Turkish bath is not obtainable, the ordinary domestic linseed poultice may prove of service. In acute lumbago, poulticing often brings speedy relief, the severest cases being greatly benefited in a few hours, and generally cured in one or two days. The poultice must be very hot, and large enough to cover the whole loins or the part affected, and thick enough to remain quite hot for at least half-an-hour, when it must be changed. Should no benefit be obtained, this treatment should be continued for three hours or longer, then the skin must be covered with a piece of flannel, which in its turn is covered with oil-silk. This after-treatment, like that of the poultices, promotes free perspiration, upon which mainly depends the efficacy of this plan.

A diametrically opposed method of treatment, that of freezing the painful part, may sometimes be adopted with advantage. Two parts of finely-powdered ice, with one of common salt, are put in a gauze bag, and placed in contact with the skin until the sensation is abolished, and it has a leathery feel, and a shrunken, tallowy appearance. The application should not be continued for more than five or six minutes, or it may cause a blister.

One of the best and most convenient methods of freezing the part is by spraying upon it with ether, the evaporation of which produces intense cold. The spray apparatus which will be found most convenient

for the purpose is known as Richardson's. It is that which is described and figured (Vol. I., p. 308) whilst speaking of the inhalation of ipecacuanha wine in the treatment of winter cough. A single application of the ether spray will in many cases afford speedy relief in lumbago.

The use of galvanism is not uncommonly attended with the most satisfactory results, the passage of what is known as the "interrupted current" effecting a speedy cure. When electricity, the needle, or poultices fail to give more than slight temporary relief, it will often be found that the lumbago is accompanied by high fever, and that it is in reality the first symptom of an attack of acute rheumatism or some other febrile disease.

The application of a good strong plaster over the loins will, by affording support to the parts, often give relief. Either menthol plaster or pitch plaster may be employed. It is desirable to have it spread on leather or some equally durable and substantial substance. In summer it is a good plan to have it punched all over with a number of little holes, to admit of the evaporation of the perspiration, so as to avoid the troublesome itching which would be caused by its retention. Care should be taken to see that the plaster is smoothly and equally applied. An attack of lumbago, affecting perhaps the whole loins, often leaves behind it one painful spot, which may cause distress only when the body is moved in one direction. Remains of a lumbago like this generally resist the usual methods of treatment, the pain being driven from one spot only to re-appear at another. A large belladonna plaster will generally mitigate the complaint, should it fail to remove it altogether.

Of the internal remedies, iodide of potassium (T. 47) and nitrate of potash (nitre) may prove useful under the conditions and in the doses referred to whilst speaking of chronic rheumatism. The former salt, however, not unfrequently fails to affect lumbago, even when the complaint is distinctly worse at night.

It has been claimed for *actæa racemosa* (*cimicifuga*) that it subdues lumbago more effectually than any other remedy. It is well worth trying in obstinate cases, but it must be admitted that it often fails. The dose is ten drops of the valoid extract every two hours.

Rhus toxicodendron is useful in many cases of chronic lumbago. It is indicated when the pain is worse when the patient is at rest, but is relieved by movement, and also in cases in which on first moving after rest the pains are increased.

Sulphur in small doses is frequently of much advantage, and it can be administered either in tabloids or in the form of the sulphur waters of Aix-la-Chapelle, of Aix-les-Bains, or Barèges. Arsenic (T. 7) is likewise occasionally adopted as a remedy in long-standing obstinate cases.

B. Crick in the Neck.—Crick in the neck, stiff neck, or, to use the technical term torticollis, is usually the result of a cold or of exposure of the affected part to a current of cold air. The pain is sometimes in the back of the neck, but more frequently it affects only one side, the patient being in the latter case compelled to hold his head awry in order to relax the muscles. A patient suffering from a stiff neck not uncommonly presents a somewhat comical appearance, and is often made the subject of much ridicule and joking; but for all that, the complaint is a very painful one, and is sometimes very intractable to treatment. A stiff neck in children is not uncommonly the cause of a considerable elevation of temperature, the fever lasting three or four days, or more.

When the pain of acute torticollis is very great it may be necessary to endeavour to obtain relief by the administration of a hypodermic injection of morphine. Local applications, however, not unfrequently prove successful. Hot fomentations are very valuable, as, for example, a piece of spongio-piline wrung out of hot water, and applied either alone or sprinkled with laudanum, or belladonna liniment, or a combination of the two. Turpentine often proves useful in these cases. Over a flannel wrung out of hot water a little turpentine should be sprinkled, and applied till it produces redness, tingling, and smarting. It is well to bear in mind that as the smarting arising from the turpentine goes on augmenting for some time after its removal, the application should be kept on only just sufficiently long to excite a moderate degree of pain.

Undoubtedly one of the best remedies for a stiff neck is an infusion of capsicum, or red pepper, or chillies, as it is sometimes called. The mode of preparation and application is sufficiently simple. You infuse a large handful of crushed capsicum pods in a pint of hot or cold water for thirty-six hours. You then soak a piece of lint in this infusion and apply it to the affected part, covering it all over with a thin piece of gutta-percha or oil-silk, to prevent evaporation. This mode of treatment was long and successfully employed by a quack in the west of England. It never blisters or causes any inconvenience, and is so prompt in its action that it will often completely cure a bad case in ten minutes.

In the majority of cases we should put our trust in local applications, and above all in the capsicum treatment. The Turkish bath often proves useful as an adjunct.

SCARLET FEVER.—(*See DISEASES OF CHILDREN, Vol. I., p. 89.*)

SCIATICA.—Sciatica is neuralgia of the sciatic nerve—the nerve which runs down the back of the thigh.

It is signalised by paroxysmal pain in the buttock, the back of the thigh, the knee, the front, back, and outside of the leg, and the whole of the foot except the outer border. The pain may not be experienced in all these situations simultaneously, but in a bad case they all in turn come in for a share of its favours. The neuralgia may attack one leg or both. Very often as soon as it begins to get better in one leg the other is attacked. The pain varies somewhat in character in different cases. It may be shooting, darting, screwing, tingling, burning, or of the peculiar nature which is commonly termed “indescribable.” It may be more or less continuous or the pain may come on in paroxysms, lasting from a few minutes to the best part of a day. The limb may feel numb and aching, and when the pain is at its height there is a natural aversion to anything in the shape of exertion. It does not make an invalid of a man or keep him in bed, but it certainly prevents him from enjoying life. A patient with sciatica wants no amusement; dinners, ball parties, and theatres are thrown away on him; and all he wants is to get home to his own fireside, where no one will speak to him or bother him. It is a disease not calculated to improve the temper. The pain may be temporarily alleviated at night, but sleep is usually disturbed, and is broken and unrefreshing. The attack may be an acute one or may, under vigorous treatment, pass off in a few days; or, on the other hand, it may hang about for weeks, or even months.

It is difficult to say what brings it on. Sitting on a stone seat or step, or on a damp cushion on the top of an omnibus, seem the favourite modes of production. Cold winds and draughts, especially when thinly clad, may excite it, and blows or falls are often credited as exciting causes. It is predisposed to by a gouty or rheumatic tendency, and an old attack of syphilis may perhaps have something to say to it. It is chiefly a disease of middle life, the majority of cases occurring in men between the ages of forty and fifty. It is not often met with in women, probably because their petticoats serve to protect that particular region.

In the treatment of sciatica the constitutional condition must be

attacked. If the complaint is associated with anæmia, iron must be given (T. 15); if there is a suspicion of gout, colchicum or lithia (T. 52) will do good; if the rheumatic is the prominent diathesis, the sulphur and guaiacum tabloids are indicated; whilst for an old syphilitic taint there is nothing so good as iodide of potassium (T. 47). If the pain is purely neuralgic, quinine is the best remedy (T. 64), especially if the pain occurs in paroxysms. In the way of local applications Chatteris oil, menthol, menthol plaster, belladonna, iodine, chloroform, mustard, and a host of other similar remedies, may be found useful.

In an article which recently appeared in the *Lancet*, it is stated that nitro-glycerine will often effect a cure after the failure of almost every other remedy. The dose is a 1-250 of a grain, and it must be injected under the skin by means of a hypodermic syringe. Tabloids containing this dose, and adapted for the purpose, are now prepared. The new method of treatment certainly deserves a trial. An injection should be given night and morning for a week.

Sometimes dry cupping does good; sometimes, linseed-meal poultices are useful, and not infrequently the Turkish bath does more good than anything.

Massage may prove useful, but a good deal depends on how the manipulations comprised under that name are performed. The ordinary advertising *masseur* or *masseuse*, especially if armed with a certificate—which may be purchased for a few shillings—is not a source of unmitigated satisfaction. Galvanism, freezing, and other similar remedies may be resorted to in obstinate cases. Electrical belts of all kinds should be carefully avoided.

The fact is that sciatica is not a simple disease, and the treatment must depend very much on the original cause of the pain. The best plan is to read carefully the articles on *Neuralgia* and *Rheumatism*, under which headings almost every conceivable method is dealt with exhaustively, definite directions being given for the use and application of each and every remedy.

SCURVY.—Scurvy, or scorbutus, as it is technically called, is a disease which is caused by the continued use of a dietary deficient in fresh vegetables.

It is considered by many that scurvy, either alone or by increasing the severity of other diseases, has proved more destructive to human life than any other disorder.

Scurvy occurs only when fresh vegetable food has been for some time partially or completely withheld. Various complaints follow the want of other descriptions of food, but scurvy never makes its appearance unless the supply of vegetables is limited.

The evidence on which this statement rests is of the most conclusive character, and no doubt can be entertained as to its correctness.

The year 1846, in which there was a failing of the potato crop in many parts of the country, was remarkable for the prevalence of scurvy. The disease occurred largely among the labourers employed in the construction of some of the Scotch railways, and in many cases proved fatal. The men were, as a rule, earning good wages, and were well fed; indeed, their extravagance in good living was a frequent subject of remark, but vegetables were in the majority of cases unattainable. Their dinner usually consisted of bread, boiled beef or bacon, pea-soup or broth, and suet puddings containing currants, and many of them were in the habit of breakfasting off beef steaks and mutton chops. For all that, however, very few of them had tasted potatoes since the failure of the crop—a period of over seven months.

In the same year in Ireland, where the disease proved very prevalent, it was found that in a certain district four-fifths of the people attacked were living on bread and tea or coffee, and that the remainder had nothing additional but a little grain or an occasional piece of meat or fish. In no single instance could it be discovered that potatoes or green vegetables formed an habitual article of the sufferer's diet.

The allied armies of England, France, Turkey, and Sardinia suffered severely from scurvy during the Crimean war. The total number of our men admitted into the hospitals with scurvy during the war amounted to considerably over 2,000; but we are told on authority that "the returns convey but a faint conception of the disastrous part which it acted among the troops, for although it comparatively rarely presented itself in well-defined forms, and as an independent infection, yet the prevalence of scorbutic taint was wide-spread, and in a vast proportion of cases evident indications of it existed as a complication of other diseases, especially fever and affections of the bowels." Sad as this history is, it is satisfactory to note that when fresh vegetables and lime-juice were served out, the complaint almost entirely disappeared. The sufferings of the French from scurvy were much greater than those of our troops; and it is said that among them no less than 23,000 cases occurred. It is probable that the Turks suffered even still more severely: and there is no doubt that the original force which formed part of the

expedition from Bulgaria to the Crimea was almost entirely swept off by disease, of which scurvy formed an important element.

During the last American war, raw potatoes preserved in molasses were frequently issued to the troops, and were found to be of signal service in warding off scurvy. It is true the disease prevailed to a great extent in the United States army, but it was when the men were obliged to live on marching rations, and it was impossible to provide them with fresh vegetables or any anti-scorbutic.

Since the year 1795, scurvy has been all but abolished from the British fleet; and when we remember that the security of this country has been on several occasions imperilled by the forced disestablishment of the Royal Navy through the ravages of this disease, it will, we think, be granted that we have something to be thankful for. It is to Dr. James Lind, "the father of nautical medicine," that we are indebted for the discovery that lime-juice has the power of warding off scurvy. It was, however, nearly half a century after the publication of Dr. Lind's celebrated work that any serious attempt was made to utilise it. In 1780 the number of cases of scurvy received into Haslar Hospital was 1,457, in 1806 *one* only, and in 1807 also *one*. Scurvy is now so uncommon that many medical men, unless they happen to practise in a seaport town, have never seen a case. At the same time, there is a growing opinion that scurvy is not such a rarity in the merchant service as it ought to be. Although the Legislature insists, under a penalty, that lime-juice or lemon-juice should be issued to the crews of vessels on long voyages, there is evidence to show that the provisions of the Act are but too frequently evaded, one of the best proofs being that the *Dreadnought* Hospital still continues to receive annually an average of ninety cases of the disease. There can be no doubt that very frequently no lime-juice at all is furnished, or a cheap imitation, consisting of tartaric acid, sugar, and water, flavoured with essence of lemon, is substituted.

The "inexplicable and unlooked-for" outbreak of scurvy amongst the crews of the *Alert* and *Discovery*, whilst engaged in the Arctic Expedition, is too fresh in the minds of our readers to call for any detailed notice.

Patients who, from disease of the stomach or other similar cause, are unable to take solid food, and are obliged to live almost exclusively upon beef-tea, are sometimes attacked with symptoms of scurvy. It is only necessary to bear this fact in mind to guard against its occurrence.

It has been frequently urged that scurvy might possibly arise from some other cause besides a deficient supply of vegetable food: as, for

example, the long-continued use of salt provisions. We have not the slightest hesitation in saying that this proposition is untenable, and for two reasons:—(1) There is no case of scurvy on record occurring in a person adequately supplied with fresh succulent vegetables of good quality; (2) The occurrence of scurvy in persons living upon salt meat may be prevented by the regular administration of fresh vegetables or lemon-juice.

It has also been said that monotony of diet is an important element in the production of scurvy. The answer to this is that probably one of the most monotonous dietaries in the world is that upon which the poor inhabitants of Ireland thrive, consisting as it does almost entirely of stirabout, milk, and potatoes. They are a fine, well-built, often athletic race, and so long as they can obtain this food scurvy is unknown, but when the monotony is broken by the failure of the potato crop, the disease soon makes its appearance.

The symptoms of scurvy can hardly be mistaken. The earliest sign of the disease is a change in the colour of the skin, which becomes pale and sallow, and even assumes a greenish tinge. Contemporaneous with this is a peculiar listlessness, and a disinclination for exertion, either mental or physical. The patient usually complains of pains in the limbs, which he generally attributes to rheumatism. He seldom displays any anxiety about his health, and seems quite indifferent on the subject. He is keenly alive to any change in the appearance of his companions, but it is often a matter of no little difficulty to make him understand that he is suffering in the same way, or that anything is the matter with him. At first his appetite remains good, and his digestion continues tolerably perfect, but usually the bowels are confined. After a time, petechiæ, or little spots like flea-bites, make their appearance on the legs and arms. They are small, of a reddish-brown colour, and are not elevated above the surface of the skin. Besides these, larger spots of an irregular shape, and apparently formed by the coalescence of several petechiæ, are observable about the lower part of the legs and on the feet. In many cases they so closely resemble bruises as actually to be mistaken for the result of violence. The general aspect of the patient is that of indifference or dejection. The face usually wears a peculiar bloated appearance. The eyes are often puffed up, so that the patient looks as if he had been fighting. The gums present a peculiar condition, which is nearly always present, and may be considered as being characteristic of the disease. At a very early period they begin

to swell at the edges, and this gradually progresses so that the teeth are encroached upon, and eventually almost disappear from sight in the huge fleshy masses which encompass them. The swollen gums are spongy, of a dark red colour, and display a disposition to bleed upon the slightest irritation. The teeth frequently become loosened in their sockets, and sometimes fall out. As may readily be imagined, chewing is out of the question, and even fluid nourishment is taken with difficulty. The smell from the breath, in consequence of the state of the gums, is generally most offensive. The skin is very dry, and often scales off with great readiness.

As the disease progresses, large swellings or tumours make their appearance in the bend of the elbow and at the back of the knee. The skin over these enlargements may retain its natural appearance or may become greatly discoloured.

Whilst these symptoms are gradually progressing, the patient suffers greatly from shortness of breath. He is frequently subject to attacks of fainting, and these have been known in many cases to prove suddenly fatal. The intellect, as a rule, remains unaffected, but listlessness is a constant symptom, and is often associated with great depression of spirits.

In confirmed cases the slightest blow or pressure breaks the skin, giving rise to the formation of the most obstinate ulcers, which heal with the greatest difficulty. They increase rapidly in size, and often eat into the flesh so as to lay bare the blood-vessels and nerves, and even the bones. They often give rise to dangerous bleeding, the exhaustion consequent upon which sometimes proves speedily fatal.

A peculiar affection of the sight often makes its appearance during the course of the disease. The patient can distinguish objects well enough by daylight, and even at night can read a book held close to a candle, but the moment he passes from the influence of the light he becomes absolutely blind, and has to be led about.

We must now consider the best method of treating scurvy. This necessarily consists of supplying the patient in the most easily assimilable form with that material by the deficiency of which his disorder has been produced.

Fruits and salads should be eaten *ad libitum*, and fresh lemon-juice, made into lemonade, should be taken in large quantities.

The existence of diarrhoea or any other complication should form no excuse for withholding this treatment.

No drug will do any good until the patient has vegetables or some anti-scorbutic remedy, and when this is administered an amelioration in even the most serious symptoms will soon be perceived.

Lemon-juice is probably more easily digested than any other form of vegetable food, but oranges, limes, cabbage, lettuce, potatoes, onions, mustard and cress, dandelion, sorrel, or grapes will answer almost as well.

It is said that water-cresses prove quite as efficacious as lemon-juice in curing scurvy.

Bael fruit has been highly recommended for the looseness of the bowels which often accompanies this complaint.

In addition to the administration of anti-scorbutic remedies, the patient's strength must be improved by such a diet as will most easily contribute to his nutrition. He may have beef-tea and eggs beaten up with wine, or, if he can bear it, solid fresh meat, roasted or boiled, with mashed potatoes, cabbage, or salad.

There are certain fruits and vegetables, in addition to those we have already mentioned, which have the power of warding off scurvy and promoting its cure.

Amongst these may be mentioned apples, which often prove useful, but are far inferior to either oranges or lemons. Sauer-kraut has long been recognised as being very efficacious in this respect. It was by providing his crew with abundance of sauer-kraut, and encouraging them to seek for wild vegetables whenever he landed, that Captain Cook preserved their health during a four years' voyage in his ship *Discovery*. In the last American war the yam, which is extensively cultivated throughout the South, was found very beneficial. It is supposed from the immunity of infants from scurvy that milk possesses the power of preventing this disease to a large extent. A similar property is also attributed to many of the light French wines. Vinegar has undoubtedly well-marked anti-scorbutic powers. It is said that the efficacy of fruits in the treatment of scurvy is owing to the tartrate of potash, citrate of potash, and malate of potash which they contain, and these salts are consequently often administered, and apparently with advantage, when fresh vegetables cannot be obtained.

Sometimes, as on board ship, fresh vegetables are not obtainable, but the medicine-chest may contain citric acid or citric acid tabloids. These dissolved in water should be used freely as a substitute for lemon-juice.

Spruce beer is an excellent thing for warding off scurvy. The essence of spruce is prepared by boiling down to concentration the young branches of the black spruce fir (*Abies nigra*). Take of this essence half a pint, bruised pimento and ginger of each four ounces, water three gallons. Boil for five or ten minutes, then strain, and add eleven gallons of warm water, a pint of yeast, and six pints of molasses. Mix, and allow the mixture to ferment for twenty-four hours. This was found very efficacious by Captain Cook in his voyages. It is an agreeable and wholesome drink in warm weather, and it has been suggested that it should be used in the Merchant Service instead of rum, which has no power of preventing scurvy. We are afraid the men would fail to appreciate the change.

For the ulceration of the mouth and gums and the fœtid condition of the breath, tabloids of chlorate of potash (T. 29) or of chlorate of potash and borax (T. 30) should be sucked almost constantly. A large supply of these will be required.

A list of measures to be adopted in time of war, or in prolonged sojourn on board ship, or at stations where fresh vegetables are scarce, may prove useful. The chief points for attention are:—

(1) The supply of fresh vegetables and fruits by all means in our power. Even unripe fruits are better than none, and we must risk a little diarrhœa for the sake of their anti-scorbutic properties. In time of war every vegetable should be used which it is safe to use, and when made into soups, almost all are tolerably pleasant to eat.

(2) The supply of dried vegetables, especially potato, cabbage, and cauliflowers; turnips, parsnips, etc., are less useful: dried peas and beans are useless. As a matter of precaution, these dried vegetables should be issued early in a campaign, but should never supersede fresh vegetables.

(3) Good lemon-juice should be issued daily (one ounce), and it should be seen that the men take it. Failing lemon-juice, citric acid tabloids should be used.

(4) Vinegar (half an ounce to one ounce daily) should be issued in the rations and used in cooking.

(5) Citrate of potash or tartrate of potash should be issued in bulk, and used in water as a drink or added to the food. The easiest mode of issuing these salts would be to have packets containing enough for one mess of twelve men, and to instruct them how important it is to place them in the soups or stews. Possibly they might be mixed with salt, and issued merely as salt.

(6) Tabloids of chlorate of potash and borax should be issued to all men suffering from sore mouths or tender gums.

The following enforced measures for the preservation and use of lemon-juice are issued by the Board of Trade. They are intended chiefly for the information of shipowners and shipmasters, but are likely to prove of service under other circumstances.

(1) Every ship on a long voyage should be supplied with a proper quantity of lime- or lemon-juice.

(2) The juice, having been received in bulk from the vendors, should be examined and analysed by a competent medical officer. All measures adopted for its preservation are worthless unless it can be clearly ascertained that a pure article has been supplied.

(3) Ten per cent. of brandy (sp. gr. 930) or of rum (sp. gr. 890) should afterwards be added to it.

(4) It should be packed in jars or bottles, each containing one gallon or less, covered with a layer of oil, and closely packed and sealed.

(5) Each man should have at least two ounces (four table-spoonfuls) twice a week, to be increased to an ounce daily if any symptoms of scurvy manifest themselves.

(6) The giving out of lime- or lemon-juice should not be delayed longer than a fortnight after the vessel has put to sea.

Since the issue of the regulations making it incumbent on shipowners to serve out lemon-juice to sailors, scurvy has become almost a thing of the past.

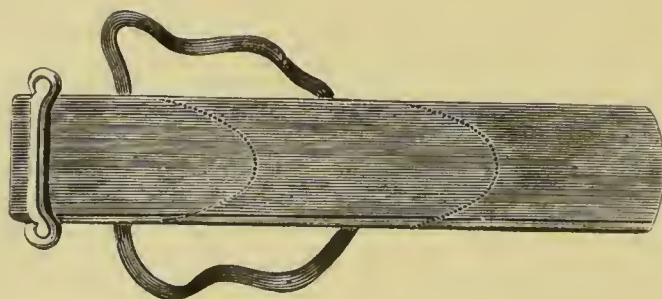
SEA-SICKNESS.—We have no intention of entering into a scientific discussion as to the causes of sea-sickness: those of our readers who are not suffering from *mal de mer* would probably be but little interested in it, whilst those who are paying involuntary tribute to old Neptune are certainly not in a fit condition to appreciate it. There is probably no derangement of organic function not absolutely a disease which causes a greater amount of suffering, and is more frequently fraught with real danger to health, and even life, than sea-sickness.

We will proceed at once to discuss the different modes of treating the distressing malady. Some people have advocated the use of certain drugs and medicinal agents, whilst others have relied solely on mental measures. These latter, it seems to us, can be of use solely as adjuncts. That the mind does exert a powerful influence over such a frightful malady as sea-sickness no one can deny. This is stated to be observed

in a striking manner in shipwrecks, when danger instantly renders everybody alert—even those who but a moment before were prostrate, and recked not what became of them. Some time ago a letter appeared in one of the papers recommending people threatened with sea-sickness “to hum a tune with regular and rather prolonged cadences.” The writer says it proved most successful in his own case, and warmly advocates its general adoption. It can hardly be expected, however, that the passengers would consent to form themselves into a temporary choral society, or that this mode of treatment could be successfully maintained during a long voyage. Much importance has been attached to retaining the horizontal position from the first moment of going on board, but this alone will not suffice to ward off an attack. In fact, we could hardly expect that it would do so, for it is well known that many animals whose position is not vertical suffer severely from sea-sickness. Thus it has been reported that an elephant crossing from Boulogne to Folkestone was greatly distressed, and dogs are not infrequently sick in crossing the Channel. There is no doubt that one’s position with regard to the vessel is not without its influence. The nausea which with the face to the bow is trifling may be increased to immediate vomiting by turning round into the opposite position for a few minutes. In association with this fact it will be remembered that the motion in a swing, which is agreeable as long as the eyes are open and the movement watched, is changed to intense nausea as soon as the eyes are closed and the motion unforeseen. Moreover, it is well known that many people feel sick when riding in a carriage with their backs to the horses.

Of late years the treatment of sea-sickness by means of the spinal ice-bag has come into vogue, and the evidence adduced in its favour is very striking. It is supposed that in sea-sickness there is an abnormal supply of blood to the spinal cord, and it is obvious that upon this supposition any mode of treatment which would reduce this quantity would prove beneficial. At first sight it would seem that the application of ice to the spine would be anything but agreeable: but those who have used it are unanimous in asserting that, on the contrary, it is quite pleasant. It is obvious that ice applied in bladders, or by any of the ordinary methods, would occasion great discomfort, and would restrain the movements of the patient, and compel him to remain for the most part in one position. The spinal ice-bag is made of india-rubber, the mouth being closed by means of a clamp, which effectually prevents the water from escaping as the ice melts. These bags, which

are usually known as "Chapman's spinal ice-bags," may be obtained from most surgical instrument makers and druggists. The following sizes are made:—8, 10, and 12 inch, suitable for children; 14, 16, and 18 inch, suitable for boys and girls; 20 and 22 inch, suitable for women; 24 and 26 inch, suitable for men. The bags are divided into cells—usually three. By this arrangement the ice is prevented from falling to the bottom, and can be kept accurately in contact with all parts of the spine. It is of importance not to fill the cells sufficiently to make them round, or only a small portion of the bag will touch the skin. The mouths of all the cells are effectively closed by means of the clamp, so that not a drop of water can escape even when all the ice has melted. Before purchasing, it is as well to see that the clamp acts properly. Directions for filling and applying accompany each bag, so that no difficulty will be experienced on this score. The bag is retained in position by means of tapes, or may be sustained in the case of men by buttoning the waistcoat and coat lightly over it, or, in the case of women, by tightening the dress in like manner. When properly secured the wearer need not remain lying down, but is able to sit up or walk



SPINAL ICE-BAG.

about as usual. For short passages, the bag should be filled before starting, but on most of the trans-Atlantic steamers ice is obtainable in any quantity, and the bag may be replenished as necessity indicates. Each bagful when applied to the back melts in about a couple of hours. For the passage between Dover and Calais one bagful suffices, and one will be sufficient between Folkestone and Boulogne, unless in cases of unusual severity. Between Newhaven and Dieppe three bagfuls are required, and between Dover and Ostend two. As the Channel steamers do not usually carry ice—at all events, in sufficient quantities for filling ice-bags—intending passengers should have the bag filled in London, and then wrapped up in a shawl or in flannel vests or petticoats, or other non-conductors of heat that may happen

to be in their portmanteaus or carpet bags. In warm weather it may be advisable to have the ice-bag packed in a box containing sawdust. For passages of several hours' duration it may be necessary to carry a supply of ice, properly packed by the ice-merchant, and an ice-breaker for the purpose of reducing it to fragments. From two to three pounds of ice for every two hours the passage lasts is the quantity required for an adult. People whose liability to sea-sickness is not very great will usually find that the malady may be wholly prevented by the application of the ice-bag as soon as they begin to feel qualmish. In all cases the ice-bag should be placed in immediate contact with the skin, and it is recommended that it should not be brought higher up the spine than the middle of the back of the neck. When the patient is lying down, the ice-bag has a tendency to slip upwards to the back of the head; but this is easily remedied. People who are unusually prone to suffer from sea-sickness should apply the bag immediately on going on board, or before the vessel starts. In the case of women far advanced in pregnancy the bag should not extend as low down as the loins. As auxiliary measures, swallowing little pieces of ice and the application of a hot-water bottle to the feet are of importance.

When ice or the ice-bag is not at hand, an inhalation of nitrite of amyl may be employed with advantage. One of the vaporoles of nitrite of amyl (V. 3) should be crushed and held close to the nose. The inhalation must be conducted rapidly, so as to obtain the full influence of the drug. It may cause flushing of the face and a feeling of pulsation in the head, but these effects are temporary, and soon pass away. A warm and comfortable glow then takes the place of the chilly sweat which is so disagreeable in this complaint, and is usually followed in the course of half-an-hour or so by a pleasant slumber, from which the sufferer awakes to eat a hearty meal. Should the sickness recur, as it may do, after the lapse of twenty-four hours, the inhalation must be repeated. It is desirable that the patient should be in bed or in the recumbent position when under treatment, so as not to interfere with the subsequent sleep. One doctor, recording his experience, states that out of 124 cases of *bonâ fide* sea-sickness this mode of treatment proved eminently successful in 121, there being no return of the vomiting after the inhalation of the nitrite of amyl, and the remaining three cases were unsatisfactory only in so far that they required a further dose or so of the amyl.

A very good remedy for sea-sickness is chloral (T. 28), but whether

it acts by simply benumbing the nerves of the stomach or by reducing the susceptibility of the whole nervous system we do not know. At all events, a passenger may take fifteen grains of chloral at Dover, fall into a drowsy, half-conscious state, and find himself at Calais free from sickness.

Sometimes one or two drops of pure chloroform taken in a wine-glass of water will prove efficacious.

Hypodermic injections of morphine are occasionally resorted to, but their use is not justifiable until other remedies have been tried, and failed.

The substance known as petroleum, mineral naphtha, or rock oil, enjoys a high reputation in the treatment of sea-sickness. It should be taken on going on board, a drop or two on a small piece of sugar, and repeated every two or three hours. A pill containing three drops of creasote is another good remedy.

Three drops of pinol and three drops of pure terebene on bread-crumbs, repeated every hour, is a favourite remedy with many people. Others prefer ten drops of tincture of iodine in a wine-glassful of water.

Ipecacuanha wine, in drop doses, which proves so successful in the treatment of many kinds of vomiting, would probably succeed in sea-sickness, although we are not acquainted with the records of any cases in which it has been tried.

An excellent remedy is a tabloid of a third of a grain of cocaine sucked slowly before starting. The patient should lie down, and should repeat the dose in three hours if necessary.

Bromide of sodium is an excellent remedy. The patient should take four tabloids in a little brandy and water, and should then endeavour to get a few hours' sleep.

A surgeon on board one of the vessels of the White Star line recently informed us that in obstinate cases he had often obtained relief by the use of iced dry champagne. It is essential, he says, that the wine should be dry, for sweet champagne only makes matters worse.

In the Levant the daily internal use of iron is a very common cure for sea-sickness. Sailors, when suffering from this complaint, obtain their iron in a very primitive manner, for they scrape off a portion of the rust adhering to the anchor and anchor-chain, and then swallow it in a little water.

SHAKING PALSY, OR PARALYSIS AGITANS.—This is an affection not uncommonly met with in old people. It is characterised by the

occurrence of involuntary tremulous or shaking movements of the limbs, head, or body. It occurs almost exclusively in men, and the large majority of cases are met with above the age of fifty. In some instances it appears to be hereditary; for we had recently under our care a patient with this complaint whose father had suffered in the same way for many years. It is said that it may be caused by violent muscular exertion, by injuries or wounds, by excessive terror or mental emotions; but the evidence on this point is far from conclusive. It is supposed that in some cases rheumatism has laid the foundation for this lamentable disease.

The onset of the complaint is generally insidious, and the progress is so slow that the patient has often a difficulty in saying exactly when it began. A feeling of weakness or a disposition to tremble fastens upon some particular part, most commonly one hand or arm. The tremors are aggravated by mental emotion or agitation, whilst rest and quiet diminish or stop them. Usually they may be controlled by grasping a weight, or by a slowly and deliberately-performed voluntary act. These tremors, at first slight and occasional, gradually increase, and after a time extend to other parts. The patient experiences considerable difficulty in performing any act requiring manipulative dexterity. He becomes unable to read or write, or hold a book, and often has considerable difficulty in dressing and feeding himself. He finds it almost impossible to drink in the ordinary way, the fluid being spilled, and the glass or cup knocked to and fro against the mouth. Patients deprived of assistance have sometimes been obliged to lap water like a dog. It is very painful to witness the struggles of the sufferer in his efforts to effect some desired movement: the more he tries the worse he becomes. He is even obliged to walk with circumspection, and the legs are not raised to the height nor with the promptness the will directs, so that much attention is requisite to prevent falling. Sometimes a difficulty is experienced in preserving the upright posture when sitting or standing, but especially in walking there is a propensity to lean forwards, which gradually increases, and the patient is in constant danger of falling on his face. The forward tendency may become invincible. Forced to walk on the toes and fore part of the feet, while the body is thrown forwards, the patient is irresistibly impelled to take short quick steps, and to adopt unwillingly a running pace—in fact, he is obliged to run to keep up with himself. Sometimes, in advanced cases, an attendant has to step backwards in front of him,

with his hands placed on his shoulders, in order to maintain his equilibrium. This forward tendency is not observed in every instance, and the tremors often occur alone. Occasionally, though rarely, there is a disturbance of balance in the opposite direction, and the patient is impelled to run backwards. We are told of a man who had to be balanced to and fro before starting, and who, if arrested in his forward movement, immediately began to hurry backwards, and could not stop himself.

Our description refers chiefly to severe and advanced cases. In many instances the complaint is so mild and its progress so slow, that were it not for the inconvenience arising from the unsteadiness of the hand in writing and other manipulations, the patient would not consider that he was suffering from any complaint at all. Sometimes the affection is confined to the muscles of the neck, and then the head is always nodding or shaking from side to side. In these slowly progressive cases the disease has no tendency to shorten life, and its duration may be indefinitely prolonged. An inmate of the Chelsea Hospital, who was first affected at the age of sixty, lived to be 107.

When fully established, it is an obstinate complaint, and not at all amenable to treatment. The mere violence of the movement, however, is no evidence of incurability, for slight tremors are sometimes the most obstinate. Benefit is often experienced from the administration of phosphorus (Pr. 53 or 54) or arsenic (Pr. 40). Bromide of sodium will ensure sleep at night. Four tabloids (T. 19) should be taken with a little whisky and water on retiring to rest. The general health may be improved by cod-liver oil or extract of malt. The application of galvanism by a medical man often does good.

SHINGLES.—(*See SKIN DISEASES.*)

SLEEP—SLEEPLESSNESS.—For the maintenance of an organ in a condition of health it is necessary that it should be allowed intervals of rest, during which the processes of nutrition and repair may go on undisturbed. Even those actions which are most continuous, such, for example, as respiration and the pulsation of the heart, have distinct periods of suspension. Thus, after each beat of the heart there is an interval, during which the organ is at rest. This amounts to one-fourth of the time requisite to make one pulsation and begin another. During an aggregate of six hours out of the twenty-four the heart is not working, and is in a state of repose.

It takes short periods of rest, like a sailor, but it has its due allowance of sleep, for all that. And this, too, is equally true of breathing. If we divide the respiratory act into three equal parts, one will be occupied in inspiration, one in expiration, and the other by a period of quiescence. During eight hours out of the twenty-four the chest and lungs are inactive. And so with the other organs of the body: each has its time for work and its time for rest. And of our muscles, none, even during our most untiring waking movements, are kept in continued action. We may be "on the move" all day, but for all that, we are not moving every part of the body at the same moment, or we should soon be exhausted, and our muscles would refuse to perform their office.

But for the brain there is no real rest, except during sleep. So long as the individual is awake he is always thinking, the brain is always active, always "on the work," and there is no such thing as rest. No man yet ever succeeded in thinking of nothing at all; you cannot do it if you try. The substance of the brain is consumed by every thought, by every action of the will, by every sound that is heard, by every object that is seen, by every substance that is touched, and by every painful or pleasurable sensation, so that each instant of our lives witnesses the decay of some portion of its tissue, and the formation of another to take its place. During our waking moments the formation of the new substance does not go on with the same rapidity as the decay of the old; repair cannot keep pace with the process of destruction—hence the necessity for sleep. The state of repose attendant upon this condition allows the balance to be restored, and hence the feeling of freshness which attends, or should attend, our waking moments. The more active the mind the greater necessity for sleep, just as with a steamer, the greater the number of revolutions its engines make the more imperative is the demand for fuel.

Most people require seven or eight hours' sleep out of the twenty-four, although many get on very well with only five or six. Students working for examinations often restrict themselves to four or five hours nightly for a few weeks, and then try and make up for it by passing nine or ten hours in bed for three or four weeks afterwards. No man can play such tricks with his health with impunity.

The necessity for sleep is sometimes so great that no effort of the will can resist it. Sentinels have been known to sleep on their posts, even in the face of the most imminent danger. Active bodily exertion will not always suffice to ward off sleep. Many men have been known

to sleep on horseback during night marches. In some of our long walking-matches against time, the pedestrian has been known to sleep at night, still keeping up his weary round. During the battle of the Nile many of the boys engaged in handling ammunition fell asleep, notwithstanding the noise and confusion of the action and the fear of punishment. It is said, too, that on the retreat to Corunna whole battalions of infantry slept while in rapid march.

"Blessings," exclaimed Sancho, "on him that first invented sleep! It wraps a man all round like a cloak." The deprivation of sleep is one of the greatest punishments that can be inflicted. The following story, quoted on good authority, will serve to illustrate this fact:—"A Chinese merchant had been convicted of murdering his wife, and was sentenced to die by being deprived of sleep. This painful mode of death was carried into effect under the following circumstances:—The condemned was placed in prison under the care of three of the police guard, who relieved each other every alternate hour, and who prevented the prisoner falling asleep night or day. He thus lived nineteen days without enjoying any sleep. At the commencement of the eighth day his sufferings were so intense that he implored the authorities to grant him the blessed opportunity of being strangled, guillotined, burned to death, drowned, garroted, shot, quartered, blown up with gunpowder, or put to death in any conceivable way their humanity or ferocity could invent." This will give some idea of the horrors of death from want of sleep. Damiens, who attempted the assassination of Louis XV. of France, and who was sentenced to be torn to pieces by four horses, was for an hour and a half before his execution subjected to the most infamous tortures with red-hot pincers, melted lead, burning sulphur, boiled oil, and other diabolical contrivances, yet he slept on the rack, and it was only by continually changing the mode of torture, so as to give a new sensation, that he was kept awake. He complained just before his death that the deprivation of sleep was the greatest of all his torments. Amongst the fearful iniquities of the "ordeal" and "torture," the system of Mersiglio was highly commended. This consisted in keeping the victim from sleep for forty hours; upon which practice it has been cynically remarked that a hundred martyrs exposed to it would become confessors to a man.

The immediate cause of sleep is believed to be a diminished supply of blood to the brain, and this will serve to explain the influence of many conditions in the production of sleep. Thus, for example, it has been shown that animals often fall sound asleep on losing a large

quantity of blood, a proportion being, of course, drawn from the brain. Most people have noticed the influence of heat—that of the fire, for example—in causing drowsiness, and eventually sleep, if sufficiently prolonged. During the prevalence of high temperatures the blood flows in increased proportion to the surface of the body, and consequently, the quantity in the brain is diminished. A slight degree of cold excites wakefulness at first; but if the constitution be strong, the effect is to favour the production of sleep. This it does by reason of the determination of blood to the surface of the body which moderate cold induces in the vigorous. The ruddy complexion and the warm hands and feet produced in such persons under the action of this influence are well known. If, however, the cold be very intense, or the reduction of temperature sudden, the system even of the strongest fails to resist it, and then a very different series of phenomena result. Stupor, not sleep, is the consequence. The blood-vessels of the surface contract, and the blood accumulates in the internal organs, the brain among them.

Many instances are on record showing the influence of extreme cold in the production of sleep, or rather stupor. One of the most striking is given in Captain Cook's "Voyages," in regard to an excursion undertaken by Sir Joseph Banks, Dr. Solander, and nine others, over the hills of Terra del Fuego. Dr. Solander, knowing from his experience in Northern Europe that the stupor produced by severe cold would terminate in death unless resisted, urged his companions to keep in motion when they began to feel drowsy. "*Whoever sits down,*" said he, "*will sleep; and whoever sleeps, will wake no more.*" Thus, at once admonished and alarmed, they set forward; but they had not gone far before the cold became suddenly so intense as to produce the effects that had been most dreaded. Dr. Solander was the *first* who found the inclination against which he had warned others invincible, and he insisted on being suffered to lie down. Mr. Banks (as he was then) entreated and remonstrated with him in vain; down he lay upon the ground, although it was covered with snow, and it was with much difficulty that his friends kept him from sleeping. Richmond also, one of the black servants, began to linger in the same manner; when he was told that, if he did not go on he would in a short time be frozen to death, his answer was that he desired nothing but to lie down and die. The doctor said he was willing to go on, but that he must first take some sleep; although but a short time before he had told the company that to sleep was to perish. It was found impossible to carry them, and there being no remedy, they were both at length suffered to lie down, being

partly supported by some bushes, and in a few minutes they fell into a profound sleep. Soon after some of the people who had been sent forward returned with the welcome news that a fire was kindled about a quarter of a mile ahead. Mr. Banks then endeavoured to wake Dr. Solander, and happily succeeded; but though he had not slept five minutes, he had almost lost the use of his limbs, and the flesh was so shrunk that his shoes fell from his feet. He consented to go forward with such assistance as could be given him, but no attempts to relieve the servant were successful. He, together with another black left with him, died.

Another potent cause of sleep, and one of which we habitually avail ourselves, is diminution of attention. Shutting the eyes so as to exclude the light, getting beyond the sound of noises, refraining from the employment of the other senses, and avoiding thought as much as possible, will do much to induce sleep. When we isolate ourselves from the external world, we lessen the amount of blood supplied to the brain, and in this way sleep results. It is not, however, always easy to do this. The nervous system is excited, ideas follow each other in rapid succession, and we lie awake for hours, vainly longing for happy oblivion. The more the will is brought to bear upon the subject, the more it rebels, and the less willing it appears to be forced into a state of quietude. In this case something may be done by endeavouring to tire out the brain. Many ways of accomplishing this object have been proposed, and are employed by different people. The great point about them all is that they are tiring and monotonous. Counting a hundred many times, listening to the ticking of a clock, working sums, and thinking of some disagreeable or tiresome subject have all their advocates. Sometimes sleep may be induced by placing a brass pan—a sponge-bath will answer admirably—in such a position that water may fall into it drop by drop. Southey's experience, as related in "The Doctor," is well worth quoting, more particularly as he indicates several methods which may in some cases prove efficacious. "I put my arms out of bed," he says, "I turned the pillow for the sake of applying a cold surface to my cheek. I stretched my feet into the cold corner; I listened to the river and the ticking of my watch; I thought of all sleepy sounds and of all soporific things—the flow of water, the humming of bees, the motion of a boat, the waving of a field of corn, the nodding of a mandarin's head on the chimney-piece, a horse in a mill, the opera, Mr. Humdrum's 'Conversations,' Mr. Proser's 'Poems,' Mr. Laxative's 'Speeches,' Mr. Lengthy's 'Sermons.' I tried the device of my own

childhood, and fancied that the bed rushed with me round and round. At length Morpheus reminded me of Dr. Torpedo's 'Divinity Lectures,' where the voice, the manner, the matter, even the very atmosphere and the stream of candle-light, were all alike somnific; where he who, by strong effort, lifted up his head and forced open the reluctant eyes, never failed to see all around him asleep. Lettuces, cowslip wine, poppy syrup, mandragora, hop pillows, spider's-web pills, and the whole tribe of narcotics, up to the bang and the black drop, would have failed; but this was irresistible, and thus, twenty years after date, I found benefit from having attended the course."

Digestion favours the production of sleep by inducing a flow of blood to the stomach, so that the brain is left in a state of anæmia, or bloodlessness. Some people always feel sleepy after a meal, although they may have partaken of food in the strictest moderation. As a rule, persons who eat largely and have good digestive powers, sleep a great deal; and there are many who cannot sleep at all at night unless they have partaken of a hearty supper.

Debility is almost always accompanied by a disposition to inordinate sleep. People who are out of condition nearly always feel drowsy and heavy, and disinclined for active mental exertion. The fact is, the brain is one of the first organs to feel the effects of a diminished amount of blood or deterioration in quality, and hence in old age, or under the influence of a deficient quantity of food, or through the action of some exhausting disease, more sleep is usually taken than when the physical health is in its normal condition.

The approach of sleep is characterised by a languor which is agreeable when it can be yielded to, but which, when circumstances prevent this, is far from being pleasant. It is a delicious moment, certainly, that of being well nestled in bed, and feeling that you will soon drop gently to sleep. Many people, however, and children especially, are rendered irritable and ill-tempered when they get sleepy. In the majority of cases the senses lose their activity in a certain definite organ. The sight is, of course, the first to be lost, the closure of the eyelids interposing a physical obstruction to the entrance of light. Even when the eyelids have been removed, or from disease cannot be closed, the sight is still the first of the special senses to be abolished. Moreover, in those animals—the hare, for example—which do not shut their eyes during sleep, the ability to see disappears before the action of the other senses is suspended. The taste is the next to fade, and then the smell; hearing follows,

and sensation yields last of all, and is the most readily re-excited. Practically, we know that it is much easier to awake a man by shaking him than by shouting at him.

Although during sleep the operations of the senses are entirely suspended as regards the effect of ordinary impressions, the purely animal functions of the body continue in action. The heart beats, the lungs respire, the stomach digests, the skin exhales vapour, and the kidneys secrete urine. With the brain, however, the case is somewhat different, for while some parts retain the property of receiving impressions or developing ideas, others have their actions diminished, exalted, perverted, or altogether arrested. Relative to the different faculties of the mind as affected by sleep, great variations are observed. It has been supposed that several of them are exalted above the standard attained during wakefulness.

Many remarkable stories are related, showing the high degree of activity possessed by the mind during sleep. Thus, it is related of Tartini, a celebrated musician of the eighteenth century, that one night he dreamt that he had made a compact with the devil, and bound him to his service. In order to ascertain the musical abilities of his subordinate, he gave him his violin, and commanded him to play a solo. The devil did so, and performed so admirably that Tartini awoke with the excitement produced, and seizing his violin, endeavoured to repeat the enchanting air. Although he was unable to do this with entire success, his efforts were so far effectual that he composed one of the most admired of his pieces, which, in recognition of its source, he called the "Devil's Sonata."

A somewhat similar anecdote has been preserved in a family of rank in Scotland, the descendants of a distinguished lawyer of the last century. This eminent person had been consulted respecting a case of great importance and much difficulty, and he had been studying it with intense anxiety and attention. After several days had been occupied in this manner, he was observed by his wife to rise from his bed in the night and go to a writing-desk which stood in the bedroom. He then sat down and wrote a long letter, which he put carefully by in the desk, and returned to bed. The following morning he told his wife that he had dreamed a most interesting dream: that he had dreamt of delivering a clear and luminous opinion respecting a case which had perplexed him, and that he would give anything to recover the train of thought which had passed before him in his dream. She then directed him to the writing-desk, where he found the opinion clearly and fully

written out, and it afterwards proved to be perfectly correct. The weak point in this case is that there is no evidence to show that the gentleman in question was really asleep when he wrote his opinion.

Circumstances that actually occur during the night are often mistaken for dreams. A gentleman on getting up one morning fancied that he had dreamed of a fire occurring in the vicinity of his house; he mentioned the circumstance to his wife, and to his surprise she informed him that the supposed dream was a reality, and that he had got up to the window, looked at the fire, talked with her about it, and that, in fact, he was at the time fully awake.

Most people dream more or less, but, curiously enough, some never do so under any circumstances: or rather, perhaps we should say that on awaking they have no recollection of having done so. Even the ancient writers were aware of this fact, and Pliny refers to men who never dreamed. Plutarch alludes to the case of Cleon, who, although he lived to an advanced age, had never dreamed. Yet, in spite of this, the great majority of writers hold the view that the brain is never at rest.

Sir William Hamilton caused himself to be aroused from sleep at intervals throughout the night, and invariably found that he was disturbed from a dream, the particulars of which he could always distinctly recollect.

Sleeplessness is very frequently the accompaniment of some disease or disorder, and is to be regarded as one of the symptoms characterising it, which will disappear under treatment directed to the original malady. But not infrequently want of sleep occurs as a purely functional disorder. When night after night a person lies awake for hours, either failing to sleep or getting it only by fits and starts, serious results are sure to follow. Inability to sleep is one of the most constant precursors and accompaniments of brain exhaustion and general decay, and when long persistent, may result in insanity. It is probable that no one cause is so productive of mental degeneration as constant wakefulness, for not only is the brain prevented from obtaining rest, but it is kept in a state of continual tension, which, if not relieved, must sooner or later lay the foundation of grave organic disease.

A very common cause of wakefulness is over mental exertion. An author, for example, strains every nerve to finish his book by a certain date, sitting up night after night, disregarding the calls of Nature and the dictates of common-sense. At last his task is completed, and then when he tries to rest he finds he cannot sleep.

It may be long before the health recovers from the excessive strain it has undergone. It is a matter of every-day experience that the body and mind may become so weary that it is impossible to sleep—over-tired, as we call it.

Sleeplessness sometimes arises from derangement of the liver. When this is the case the patient is often heavy and drowsy after a full meal, and he may fall asleep at once on retiring to rest, but after one, two, three, or four hours, he awakes, and then he either lies awake for hours or is constantly falling asleep, dreaming or having the nightmare and awaking—four or five times, or even oftener, in the course of an hour—until the morning comes, when he drops into a quiet sleep of an hour or more, and gets up tired and irritable. This particular form of sleeplessness is often induced by certain articles of diet, or by some injudicious combination of them. An indiscretion that will excite headache, giddiness, or palpitation in one causes sleeplessness in another. In these cases the rational treatment is obviously that of biliousness. A blue-pill or two will often do more to effect a cure than a whole arsenal of opiates or soporifics.

Very often sleeplessness arises from the stomach rather than from the liver. This may be the case when there are no other obvious symptoms of indigestion; the appetite may be good, and there may be no pain, flatulence, or other discomfort after meals. This form of sleeplessness has long been recognised. In these forms of sleeplessness harm is often done by the administration of opiates. Very often relief may be obtained by careful attention to diet, and particularly by strict moderation in the use of wine or beer. In many cases a dose of carbonate of potash or carbonate of soda on going to bed, or on first awaking in the morning, is of service. Many people who suffer from this form of sleeplessness never do so well as after a dose of calomel or a blue-pill.

There are many other circumstances which have a tendency to produce sleeplessness. Smoking strong tobacco late at night, especially after errors of diet, is by no means an infrequent cause. Strong odours, as of flowers, perfumes, or even embrocations, may act in the same way. Excessive exercise, as in dancing, mental excitement, as in late entertainments, in amusements, or in music may be mentioned. Care, trouble, sorrow, mental anxiety, are all enemies to sleep. Children are not infrequently prevented from sleeping by bad dreams, too often excited by the tales or threats of ignorant or injudicious nurses. The practice of taking "forty winks" after dinner, though not in itself

objectionable, if the authorised number be not exceeded by undue indulgence, may forestall the night's rest, and make it difficult to get off to sleep. Often enough the most relishing snatch of slumber out of bed is the one which a tired person takes before he retires for the night, while lingering in his sitting-room. The consciousness of being very sleepy, and of having the power to go to bed immediately, gives great zest to the unwillingness to move. Some people, it is to be feared, go to bed with a fixed idea that they cannot sleep, and they dwell on that idea, and consequently do not sleep. And, lastly, women of a nervous excitable temperament are often annoyed by an inability to obtain sound repose during pregnancy, or they may suffer from complete insomnia after delivery.

We will now consider the best mode of curing sleeplessness, and we wish to state, in the first place, that the practice of resorting to a narcotic on every trivial occasion is as bad as bad can be. There is a great deal to be done before we can even think of taking medicine.

To begin with, it is necessary to try and find out the exciting cause of the wakefulness, and then to remove it, if possible. If a man is over-working himself, it is of not the slightest use giving him drugs to make him sleep, unless he will consent to go under easy sail for a time. That would be the abuse of medicine, not its use.

Much may be done by measures which tend to improve the general health, especially such as are of a hygienic character.

Is the room in which the patient sleeps all that it should be? Is it large and airy, and, at all events, moderately well ventilated? If not, this must be remedied without delay. Has the patient a fair allowance of bed-clothes? Possibly he would be benefited by having a fire in his room at night or a hot-water bottle to his feet. Is he regular in his habits? He should go to bed every night at the same hour, and get up at the same time in the morning. A man who is irregular, and goes to bed one night at ten, and the next not till two or three in the morning, cannot expect to sleep well; and he certainly does not deserve to.

Many people pass far too many hours in bed—seven or eight is enough for any man. We know people who are never satisfied, and are always complaining because they cannot sleep twelve hours at a stretch. To be able to do so would be no indication of health, but rather the contrary. Many a man has been cured of his inability to sleep by taking a warm bath the last thing before going to bed.

Often enough there is some error in diet which requires to be looked to. Many people find they cannot sleep if they go to bed on an empty stomach. With many, a hearty supper of plainly-cooked and nutritious food rather favours sleep than otherwise. Of course, indigestible substances, such as cheese or pastry, should be avoided. A glass of good bottled stout is by no means a bad provocative of sleep. A plain biscuit after lying awake for some time will often bring relief.

Some people sleep best when propped up in bed, and others when lying quite flat on their backs. A low pillow, a hard pillow or a hop pillow may conduce to sleep. If the air of the bedroom be dry, and there is a sense of stifling or stuffiness, it is a good plan to have the floor freely sprinkled with water containing a little Condyl's fluid; or if warmth as well as moisture be desired, the steam may be allowed to escape into the room from a kettle on the hob.

Walking, riding, or driving in the open air, change of society, of scene, of air (provided only that it be pure and bracing), may prove remedial. A good walk two hours before bed-time is beneficial in many cases. Reading exciting works of fiction late in the evening is to be prohibited, and everything possible should be done to prevent the normal functions of the brain from being over-excited during the day.

Sometimes advantage is derived from getting rid of curtains and bed-hangings. The practice of keeping the bedroom window open all night is a good one.

We are told that Bacon used to indulge in a posset of strong ale to subdue the activity of his brain before going to bed; and in imitation of his practice, we sometimes recommend in cases of debility that a tumblerful of port wine negus, or of mulled claret, or of hot elder wine or of white wine whey, should be taken the last thing. In other instances, where the skin is hot and dry, a glass of cold water may be useful.

Should the bowels be habitually constipated, this must be seen to (*see* CONSTIPATION). If there be headache, a rag dipped in cold water and applied to the forehead may give relief. Attempts may be made to get into "the land of Nod" while comfortably seated in an easy-chair.

One of the best remedies for sleeplessness is bromide of sodium. It has been found of especial use in obviating that sleeplessness and wandering at night not infrequently occurring during convalescence from acute diseases. In sleeplessness from other causes, as worry, over-work, grief, or indigestion, it may be employed with every

expectation of success. It is especially indicated if besides sleeplessness the patient, although of abstemious habit, suffers from delirium resembling that of delirium tremens. In the sleeplessness of delirium tremens itself the bromide is of conspicuous benefit. It is to be given in a single dose of twenty grains at bed-time (T. 19).

Chloral is another valuable remedy for the relief of sleeplessness. It should be given shortly before bed-time, and the patient should avoid excitement, and keep quite quiet, or it will produce restlessness instead of sleep. It is efficacious in subduing the sleeplessness of old people, and the wakefulness induced by excessive mental fatigue. The dose is a tea-spoonful of the syrup of chloral. There is not the slightest objection to giving it in combination with bromide of sodium and for an adult a very good combination is three tabloids of the bromide of sodium (T. 19) with two tabloids of chloral (T. 28). The sedative draught (Pr. 37) may be used.

As we all know, opium is a remedy frequently employed for the production of sleep, but it is a drug that must be employed with the greatest caution. Many a man has entered upon his last long sleep through the injudicious administration of a dose of laudanum. Never give a sleeping-draught containing opium to anyone with extensive lung disease or with disease of the kidneys. Chronic sleeplessness, independent of any notable disease, should not be treated with opium if it is possible to avoid it. As a rule, bromide of sodium and chloral are much safer and better agents than laudanum. Still, when sleeplessness is caused by severe pain, or our other remedies have failed, we may be glad to resort to an opiate. When opium is given to produce sleep, attention must be paid to the time of its administration. It should be given at the usual time for sleep, or when the patient feels inclined to doze, so that it may aid Nature, herself striving to induce the same result; small doses are then as effectual as larger given at a less seasonable time. As a rule, a dose of opium requires about two hours to produce its effects. It is conveniently given in the form of laudanum, twenty drops in a wine-glassful of water. Sometimes a morphine suppository succeeds better than when the drug is given by mouth. These suppositories are little cones of wax about half an inch long, containing a dose of morphia. When pushed up the back passage they dissolve with the heat of the body, and the effects of the drug are produced. The morphine suppository is a pharmacopœial preparation, and they may be obtained from any chemist. Only one is to be used at a time. The hypodermic injection of morphine must not be

forgotten, although it is not a mode of treatment we are justified in resorting to without absolute necessity.

Coffee is an admirable remedy for some forms of sleeplessness. A spoonful or two of very strong coffee without sugar or milk will speedily subdue the sleeplessness arising from agitation of mind or body, or from extreme anxiety or mental labour. The wakefulness of children and of old people is especially under its control.

A small tea-spoonful of spirits of ether or spirits of chloroform, in a wine-glassful of water at bed-time, will often induce sleep. The peevish sleeplessness of children is often removed by tea-spoonful doses of infusion of chamomile. When restlessness depends on indigestion, errors of diet, excesses of any kind, or on constipation, *nux vomica* may do good. Five drops may be taken in a wine-glassful of water three or four times a day.



